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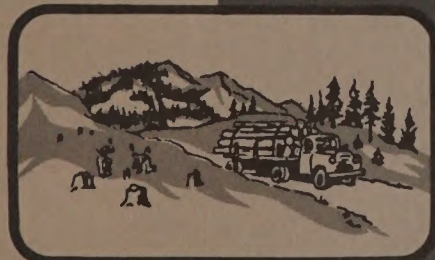
Durango, Colorado



LAND AND RESOURCE MANAGEMENT PLAN

SAN JUAN
NATIONAL FOREST

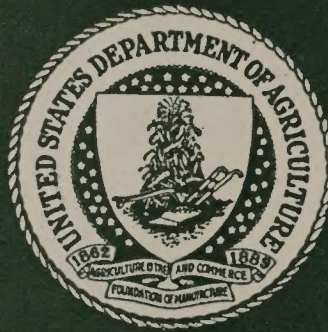
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LAND AND RESOURCE MANAGEMENT PLAN
(Proposed)

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PREFACE

PURPOSE OF THE PLAN

This proposed National Forest Land and Resource Management Plan (Forest Plan) was developed to direct management of the San Juan National Forest. The goal of the Forest Plan is to provide a management program reflecting a mixture of management activities that allows for use and protection of the San Juan National Forest resources while fulfilling legislative requirements and addressing local, regional, and national issues. To accomplish this, the Forest Plan:

- establishes management direction and associated long-range goals and objectives for the Forest for the next 50 years (through the year 2030).
- specifies standards and approximate timing and vicinity of practices necessary to achieve that direction.
- establishes monitoring and evaluation requirements needed to ensure that direction is carried out and to determine how well outputs and effects were predicted.
- will be reviewed, and updated as necessary, at least every ten years.

Because of the need for uniform management direction on wilderness areas that overlay Forest boundaries, this Forest Plan establishes direction for entire wildernesses as a result of cooperative efforts between affected Forests.

Preparation of the Forest Plan is required by the Forest and Rangeland Renewable Resources Planning Act (RPA), as amended by the National Forest Management Act (NFMA). Assessment of its environmental impacts is required by the National Environmental Policy Act (NEPA) and the implementing regulations of NFMA [36 Code of Federal Regulations (CFR) 219]. The Forest Plan replaces all previous resource management plans prepared for the San Juan National Forest. Upon approval of the Forest Plan, all subsequent activities affecting the Forest, including budget proposals, must be in compliance with the Forest Plan [36 CFR 219.11(d)]. In addition, all permits, contracts, and other instruments for the use and occupancy of National Forest System lands must be in conformance with the Forest Plan [16 USC 1604(i)].

RELATIONSHIP TO OTHER PLANNING LEVELS AND STUDIES

Development of a Forest Plan occurs within the framework of U. S. Forest Service regional and national planning. The RPA Program sets the national direction and output levels for National Forest System lands based on suitability and capability information from each Forest Service Region. Each Region disaggregates its share of the national production levels among the Forests of the Region. This distribution is based on the detailed site-specific information gathered at the Forest level.

Each Forest Plan, in turn, either validates or provides a basis for changing production levels assigned by the Region. Activities and projects are planned and implemented by the Forest to carry out direction developed in the Forest Plan. Information from Forest Plans of all Forests in the Region will be used in developing and revising a Regional Land and Resource Management Plan. Upon completion of the Regional Plan, a review will be made to determine if amendments to Forest Plans are necessary.

The relationship of this Forest Plan to the Roadless Area Review and Evaluation (RARE II) process was resolved by Public Law 96-560, enacted December 22, 1980. This Act, also called the Colorado Wilderness Act, designates the West Needle (15,800 acres), the Piedra (41,500 acres) and the South San Juan Wilderness Expansion units (32,800 acres) as Wilderness Study Areas to be studied and a determination made as to their suitability or unsuitability for wilderness designation. Determinations for these areas are made in this plan. Wilderness study reports will be prepared for each of these areas and formal public hearings held prior to submission of these determinations to Congress.

The Colorado Wilderness Act also specifies that areas of the Forest reviewed in the RARE II Final Environmental Impact Statement and not designated as either wilderness, or needing further study must be managed for the purpose of protecting their wilderness characteristics. This law has eliminated any need to evaluate additional areas for wilderness until the first revision of this Forest Plan.

In the National Materials and Minerals Policy Research and Development Act of 1980 and the Energy Security Act of 1980, Congress has directed the Forest Service to encourage private investors in developing domestic mineral resources and to proceed in making recommendations to the Bureau of Land Management regarding leasing proposals on National Forest System lands. Minerals management direction is contained in Section III under Forest-wide Management Requirements of this Plan.

Congress has also directed that portions of the Dolores, Piedra and Los Pinos Rivers be studied as potential components of the National Wild and Scenic Rivers System. The Environmental Impact Statements and Study Reports have been prepared. Until congressional action is taken to determine their status, the Forest Plan will determine management for the rivers that will protect the values which caused them to be eligible for Wild and Scenic classification.

An Environmental Impact Statement (EIS) was prepared by the Bureau of Reclamation, with Forest Service coordination, for construction of the McPhee Reservoir and related developments involved in the Dolores Project. This EIS was approved in 1977, and construction work has begun. The major involvement of the San Juan National Forest in this project is the inclusion of approximately 3,800 National Forest acres within the project boundary, the Forest Service input into planning new recreation and wildlife developments on the reservoir shore, and the eventual responsibility of the Forest Service to manage recreation use and wildlife habitat after the project is completed in 1985.

Budget proposals for fiscal years 1983 and 1984 will have been submitted to Congress by the time this Forest Plan can be implemented in fiscal year 1983. Included in these proposals are operation, maintenance, and investment projects costs for the continued management of the San Juan National Forest.

Investment projects, because of their size and complexity, are phased in over a period of three to five years. For example, timber sales to be sold in 1984 are normally inventoried and reconnaissanced in 1982, marked and cruised in 1983, and appraised and sold in 1984. Roads, campgrounds, wildlife habitat projects and grazing systems are phased in the same way. The number and type of disciplines (e.g. foresters, wildlife biologists, engineers) needed in the organization are also tied directly to these projects. In addition, there are many existing contracts or permits for timber sales, special uses and grazing. Duration of these contracts are from several months to several years as in the example of a special use road.

When the Forest Plan is implemented in fiscal year 1983, the time needed to bring activities into compliance with the Forest Plan will vary depending on the type of project. Most operation and maintenance activities, projects in the first year of development, new special use proposals and transfers of existing permits can be brought into compliance with the Forest Plan within the first year of implementation. Projects in the second to fifth year of implementation as well as many contractual obligations will continue as planned.

PUBLIC REVIEW AND APPEAL RIGHTS

The opportunity to request an administrative review of a Forest Plan and Environmental Impact Statement is limited by the National Forest Management Act regulations. The regulations [36 CFR 219.11(c)(4)(i)] state:

"Persons who participated in the planning process, or who can show good reason why they were unable to participate, and who have an interest which is, or may be adversely affected by a decision to approve or disapprove a Forest Plan, revision, or significant amendment, may request a review of that decision. Intermediate decisions made during the planning process and prior to the approval or disapproval decision are not reviewable. If the party requesting review participated in the planning process, administrative review is limited to those issues which the requesting party raised during participation in the planning process. Participation in the planning process means direct and documented involvement with the responsible official or the interdisciplinary team in the planning process described in §219.5 of this subpart. Except as provided in this paragraph, the provisions and procedures which apply to administrative review under §211.19 of this chapter apply to the review of decisions approving or disapproving a Forest Plan, revision, or significant amendment."

Comments regarding this Plan should be sent to:

Forest Supervisor
San Juan National Forest
701 Camino del Rio
Durango, Colorado 81301

San Juan National Forest
Land and Resource Management Plan
(Proposed)

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1. introduction

CHAPTER I

INTRODUCTION

ORGANIZATION OF THE FOREST PLAN DOCUMENT

The proposed National Forest Land and Resource Management Plan (Forest Plan) defines the long-term direction for managing the San Juan National Forest. The Forest Plan document consists of two parts, the Forest Plan and Management Area maps. The Forest Plan defines overall direction and details activities required to achieve the desired conditions of the Forest. The Management Area Maps accompany the plan and show locations of management prescriptions, proposed timber harvests through 1990, major roads proposed for construction or reconstruction through 1990, and a land adjustment plan. In addition, implementation maps showing estimated timing and vicinity of proposed management practices during the first ten years will be maintained in the appropriate Ranger District Offices.

Chapter II of the Forest Plan describes present condition of Forest resources as well as expected changes resulting from implementation of the Forest Plan. Chapter III includes the main body of management direction. It is divided into three sections. The first section explains how direction is to be implemented. The second section explains Forest direction, detailing the goals, objectives, and standards and guidelines that collectively define how the Forest is to be managed throughout the planning period. The last section explains management areas and contains goals, management practices, and standards, and guidelines. Management area direction is directly related to the Management Area Maps. Chapter IV lists the techniques that will be used to monitor and evaluate implementation of the Forest Plan, and includes the frequency and accuracy of monitoring and evaluation. Chapter V is an index for the Forest Plan.

The analysis that supports the Forest Plan is contained in the accompanying draft Environmental Impact Statement (EIS). Therefore, the Forest Plan and the draft EIS are companion documents. The draft EIS describes alternatives considered in arriving at the proposed Forest Plan and assesses environmental effects of implementing the Plan and its alternatives. Also contained in the draft EIS appendices is a Glossary, Reference List and List of Preparers to aid in reading and interpreting the Forest Plan.

The Environmental Impact Statement prepared for the Forest Plan will be used in tiering (40 CFR 1502.20 and 1508.28) future environmental assessments (EA's). Tiering means that EA's prepared for projects arising from the Forest Plan will incorporate this Environmental Impact Statement and associated documents by reference, rather than repeating information. Environmental assessments carried out for specific projects being implemented under direction of this Forest Plan will therefore be site specific only. Environmental assessments will not be written for projects and activities adequately covered in the EIS.

This document displays management direction for the following wildernesses:

Name	Net N.F. Acres	Administrative Unit
Lizard Head Wilderness	21,400	San Juan N. F.
Lizard Head Wilderness	18,600	Uncompahgre N. F.
	40,000	
Weminuche Wilderness	294,284	San Juan N. F.
Weminuche Wilderness	168,940	Rio Grande N. F.
	463,224	
South San Juan Wilderness	45,000	San Juan N. F.
South San Juan Wilderness	88,463	Rio Grande N. F.
	133,463	

Management direction for the above wildernesses was established as a cooperative effort between Forests to ensure uniform management decisions within each wilderness area. Nevertheless, each Forest will continue to administer those portions of wildernesses within their respective boundaries.

Management area direction for wildernesses is displayed as "Prescription for Management Area 8" in Chapter III. The accompanying Management Area Map (Chapter VII) also displays management area direction for the wildernesses.

Alternative management direction for the wildernesses along with environmental effects are disclosed in the accompanying draft EIS.

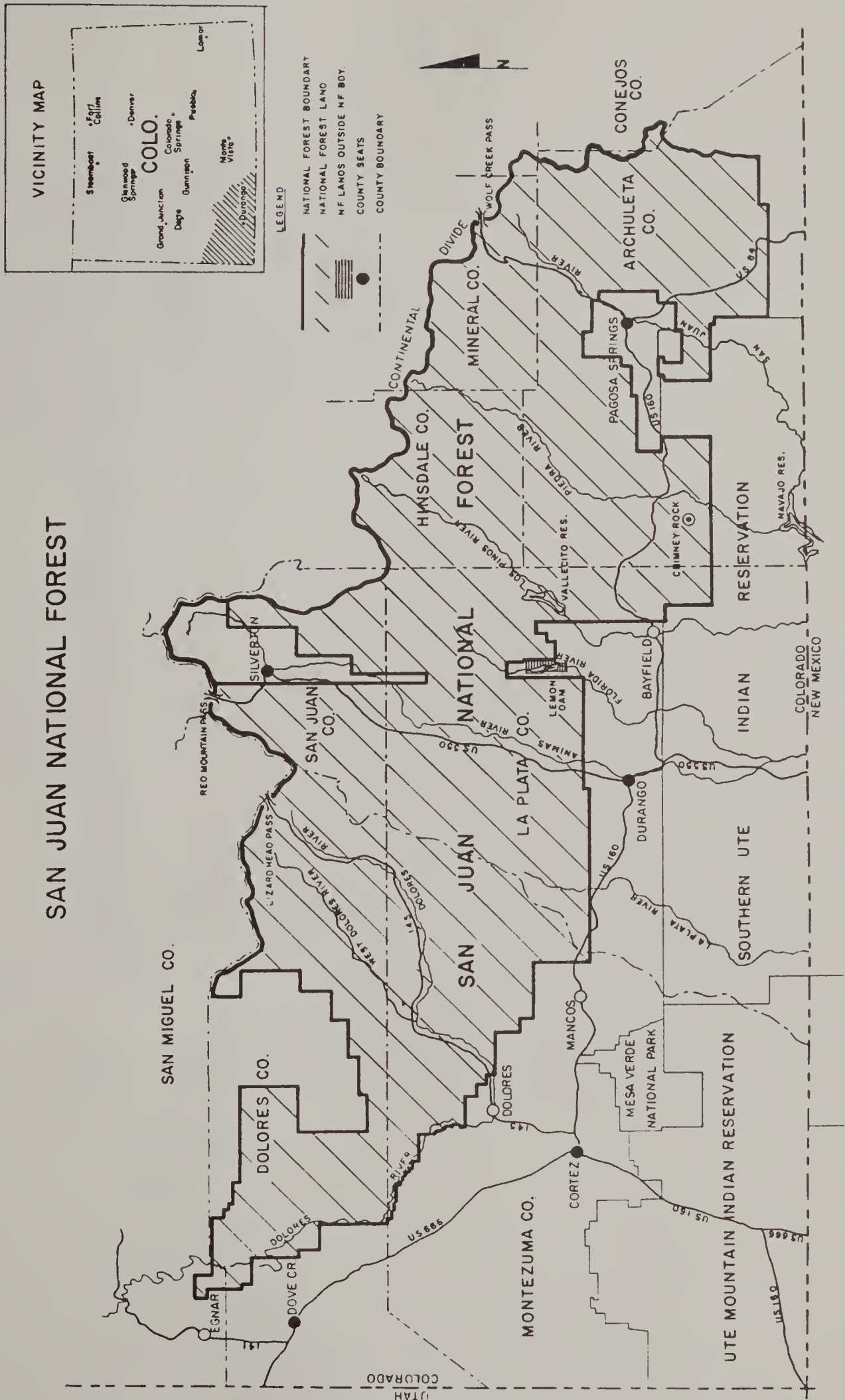
The "Record of Decision" for the final EIS will include the management decisions for the Uncompahgre and Rio Grande National Forest portions of the Lizard Head, Weminuche and South San Juan Wildernesses.

LOCATION OF THE FOREST

The San Juan National Forest is located in southwestern Colorado. It is an administrative unit of the Rocky Mountain Region of the Forest Service, U. S. Department of Agriculture. Portions of this Forest lie within La Plata, Montezuma, Dolores, San Juan, Archuleta, San Miguel, Hinsdale, Mineral, Conejos and Rio Grande Counties (See Figure I-1).

The Forest is geographically separated from the rest of Colorado by the San Juan Mountains and lies near no major population center. The total population of the five-county area including La Plata, Montezuma, Dolores, San Juan and Archuleta Counties, surrounding the Forest is approximately 50,000 people. The portions of San Miguel, Hinsdale, Conejos and Rio Grande Counties that are within the Forest have less than 500 people living within these portions.

FIGURE I-1





II. management situation

CHAPTER II

MANAGEMENT SITUATION

This chapter describes the San Juan National Forest as it is today and how it is expected to change under implementation of the Forest Plan. Included is a description of the setting in which the Forest is managed, its resources and uses, demands placed on the Forest, and how those demands will be met through management of the Forest. The information used to create this description is a result of an analysis that determined supply and demand conditions as well as changes needed to correct present problems and prevent future ones. A more detailed assessment is given in Chapters II and III of the accompanying draft Environmental Impact Statement and in Planning Action 4, "Analysis of the Management Situation," available in the planning records.

The second part of this chapter summarizes future conditions under direction of the Forest Plan and specifies both the type and the general location of activities that will occur. Expected future conditions of the Forest also reflect the way in which proposed management direction addresses planning questions.

THE PRESENT

PHYSICAL AND BIOLOGICAL SETTING

The San Juan National Forest covers 1,867,782 acres in southwestern Colorado.

The boundary of the Forest encompasses the northeasterly portions of the San Juan and Dolores River basins. The boundary generally follows the crest of the Continental Divide and the Wilson Mountains on the east and north. The south and west boundary extends in a stairstep fashion from Chromo, Colorado, in the southeast to a point 40 miles northwest of Dolores, Colorado.

The San Juan River system drains most of the San Juan National Forest, except that part of the Forest in the Dolores River drainage. The Mancos, Animas, Los Pinos and Piedra Rivers are major tributaries of the San Juan River. Both the Dolores and the San Juan Rivers eventually flow into the upper Colorado River.

The San Juan National Forest is located where the Southern Rocky Mountain physiographic province joins the Colorado Plateau province. The Forest has diverse topography consisting of mesas, deep canyons, foothills and rugged mountains. The San Juan Mountains dominate the eastern end of the Forest. The La Plata, Rico, and Wilson Mountains occur in the central and west portions of the Forest. Elevations range from just above 6,000 feet to peaks over 14,000 feet.

General topography and geology of the Forest resulted from the domal uplift of a 10,000 square mile area which was subsequently eroded by a combination of water and extensive alpine glaciation. Volcanic activity, faulting and sagging have also been part of the geological process.

The San Juan National Forest includes four major climatic and vegetative zones: lower montane forest, upper montane forest, subalpine forest, and alpine tundra. Wildlife species whose range extends throughout all four vegetation zones include mule deer, elk, bighorn sheep, mountain lion, coyote, bear, beaver, and marten. Game fish species include cutthroat, rainbow, brook, and brown trout, northern pike, and kokanee salmon.

Common timbered vegetation types on the Forest include pinon-juniper, ponderosa pine-oakbrush, Douglas-fir, spruce-fir, and alpine. At lower elevations ponderosa pine, pinon pine, juniper, sagebrush and Gambel oak predominate, and at higher elevations Engelmann spruce, Douglas-fir, white fir, quaking aspen, and corkbark (subalpine) fir are common. Representative grasses on the San Juan National Forest include bluegrass, fescue, and wheatgrass which provide forage for both domestic livestock and wildlife.

SOCIAL AND ECONOMIC SETTING

Area of Influence

The area of social and economic influence of the San Juan National Forest includes Archuleta, Dolores, La Plata, Montezuma and San Juan Counties in southwestern Colorado. The Forest covers 1.5 million acres in this five-county area, and activities and outputs are estimated to be directly or indirectly responsible for approximately 12 percent of the total employment within this area of influence. While portions of the San Juan National Forest lie within in Conejos, Hinsdale, Mineral, Rio Grande and San Miguel Counties, residents relate more strongly to communities and National Forests north and east of the Continental Divide.

Population

The area of influence is separated from the front range population centers of Colorado by the San Juan Mountains. The area's total population is about 50,000 people. Populations declined, in some cases dramatically, in all five counties between 1960 and 1970. This trend reversed itself spectacularly after 1970, and projected growth is expected to more than double the five-county area's population over the next 30 years.

Almost half of the area's population lives in Durango, Cortez, Pagosa Springs and the seven other incorporated towns in the area of influence. Subdivision growth around Durango, Cortez and Pagosa Springs is rapid and rural "bedroom" communities are developing.

Employment and Income

The average per capita income for the five-county area in 1973 was about \$3,630; by 1978 it had risen to \$5,450. After adjusting for inflation, this represents almost a ten percent increase in per capita real income. Total income earned by all residents also increased markedly from 1973 to 1978, except in Dolores County, which had only a seven percent nominal increase. After adjusting for inflation, per capita and total real income in Dolores County declined more than 20 percent over that five-year period.

Unemployment in 1980 was low in all counties except Archuleta, which experienced a jobless rate of nearly 12 percent. Total labor force in the five-county area in April 1980 was estimated to be 23,950, of which 22,600 were employed, for an overall employment rate of 5.6 percent, which is slightly above the Colorado average of 3.6 percent. About 12 percent of this employment, or approximately 2,750 jobs, relates to activities and outputs on the San Juan National Forest. Based on an employment to population ratio of 1 to 2.2 for the area, it is estimated that these jobs support about 6,000 residents of the five-county area.

Social Resource Units

The Forest Service has geographically subdivided the Rocky Mountain Region into Social Resource Units (SRU's). Social Resource Units serve as a framework for assessing social, cultural, and economic interactions within the physical resources base. Social Resource Units define areas characterized by common issues. As these issues are clarified, goals can be set by the public, government, and business to create human, economic, and environmental benefits. The Social Resource Unit concept is used to address broad regional, rather than Forest issues. The units are defined by natural boundaries such as mountain valleys and river basins and by the way people live such as settlement patterns and agricultural activity.

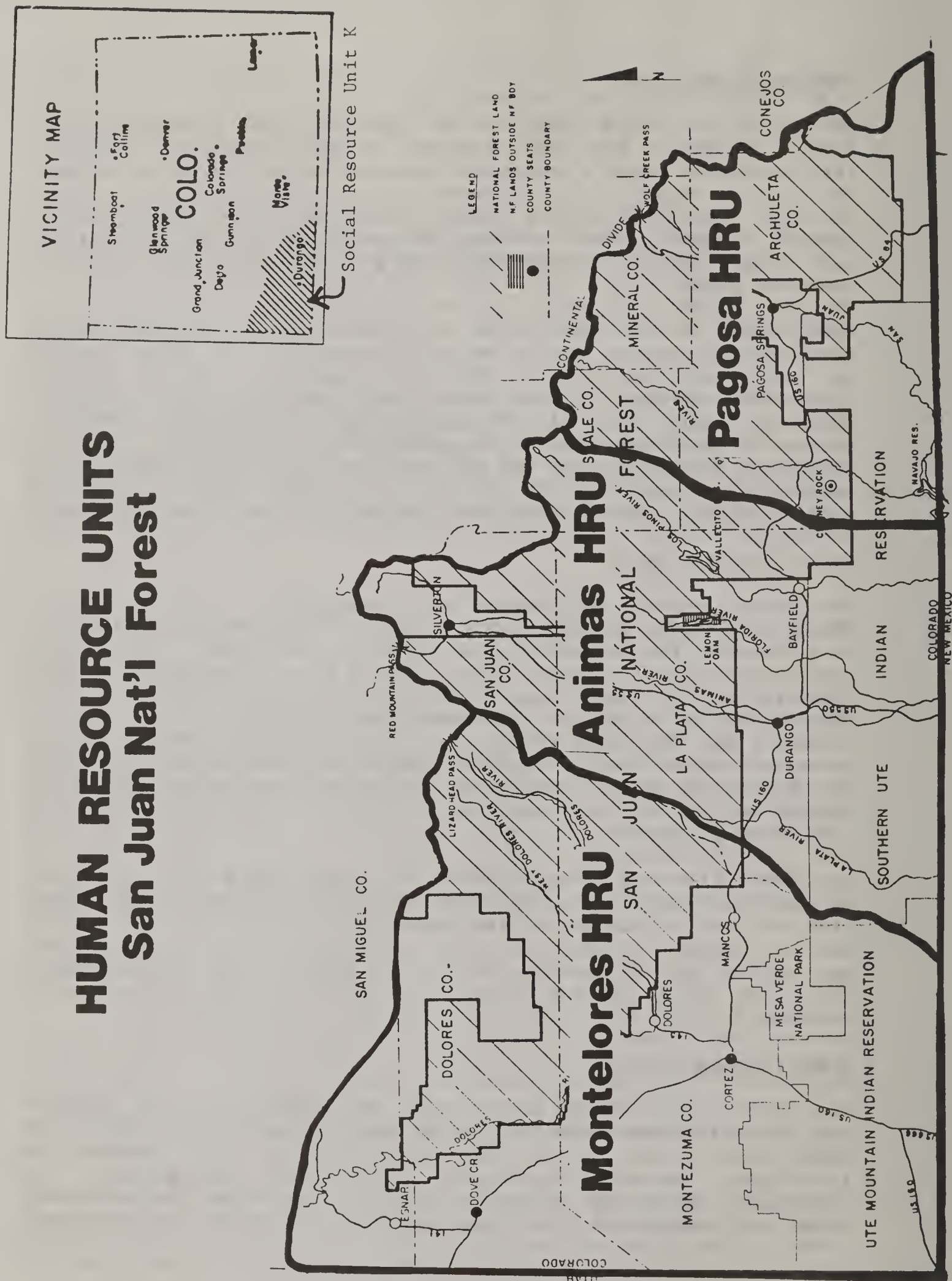
The Forest lies within the Region's Social Resource Unit K. This unit is shown on Figure II-1; it lies in a physically isolated area separated from the rest of Colorado by the Continental Divide to the east and the San Juan Mountain Range on the north. The major portion on the southern part of the Unit is Southern Ute and Ute Mountain Ute Indian Reservation. The desert of Utah isolates the Unit from other settlements to the west.

Human Resource Units

The Forest has delineated smaller units of analysis within the boundaries of Social Resource Unit K, called Human Resource Units (HRU's). A Human Resource Unit is an area characterized by unique patterns of life-styles, economic conditions, institutional arrangements, and topography. HRU's vary in size but are typically larger than individual towns and communities, and they may cross political jurisdictions.

HUMAN RESOURCE UNITS San Juan Nat'l Forest

FIGURE II-1



There are three HRU's identified on the Forest. They are also shown in Figure II-1. The Pagosa, Animas and Montelores HRU's were designated to help design management actions at the National Forest and Ranger District levels that would be responsive to local issues, conditions and needs.

The following discussion briefly describes each HRU by identifying the general history of the area, as well as lifestyles, attitudes, beliefs, values, social organization, and significant population characteristics.

Montelores HRU

The Montelores HRU lies primarily in Montezuma and Dolores Counties, although a portion of it extends eastward into La Plata County, and northward into San Miguel County. The western border of the unit is the Utah state line, with the New Mexico State line forming the southern border. The northern boundary runs from a point a few miles north of the Dolores County line southeastward to a point a few miles east of Lizard Head Pass. The eastern boundary forms the western boundary of the Animas HRU. This HRU is perceived by the residents as the "Montelores Area."

Lifestyle - The entire area is strongly oriented toward a rural lifestyle. Cortez is the only town with over 1,000 people, but it is a community oriented toward tourism, agriculture, mineral development and energy. Cortez is the trade center of the HRU, and Montezuma County is the second most populous county in southwestern Colorado. The importance of mining, energy and timber industries has fluctuated widely in the last 30 years but is presently on the rise.

Work routines are different within the town of Cortez than in the rest of the area. Light industry, government, tourism and retail trade dominate Cortez, and places of employment are generally in town. For the rest of the HRU, employment is more agricultural oriented and is also more seasonal. Unemployment increases during the winter. Big game hunting is an important event and attracts a large number of out-of-area hunters. Major economic events will be the development of McPhee Reservoir and energy projects.

Summer recreation focuses on fishing, camping, hiking, and other types of recreation opportunities on National Forest System lands. No major ski areas exist; however Hesperus and Stoner are popular with local residents, and the area is within commuting distance of Telluride and Purgatory. Winter recreation is on the increase especially cross-country skiing and snowmobiling.

Attitudes, Beliefs and Values - The predominant attitudes are that natural resource development and utilization is good and is necessary for growth and progress.

Social Organization - All areas in the HRU are covered by protective services such as county sheriff's offices, fire districts, and search and rescue. Medical facilities, including a full service hospital, are located in Cortez, but serious cases requiring specialized care are

usually referred to facilities in Durango or Farmington, New Mexico. The Ute Mountain Ute Indian Reservation is headquartered at Towaoc, about 15 miles southwest of Cortez.

Population and Land Uses - Despite a growing population, subdivision development has not caused loss of big game winter range or National Forest access problems in the Montelores HRU that it has elsewhere. Property values in the area have increased.

Animas Human Resource Unit

The Animas Human Resource Unit (HRU) is bounded on the west by a line running essentially from Red Mountain Pass southwest to the New Mexico border. This line crosses U. S. Highway 160 just west of Hesperus. The northern boundary of the HRU is the Continental Divide. The eastern border runs south from the Divide a few miles east of the Los Pinos River down to the New Mexico line.

The entire HRU is dependent on Durango as a primary trade and service center and as a recreation visitor entry point. The bulk of the unit is in La Plata and San Juan Counties.

Population, employment and income - San Juan County's population has remained stable at around 850 persons for the past 20 years, but La Plata County's population increased 41 percent between 1970 and 1980, from 19,199 to 27,107. State projections are that La Plata County's population will more than double over the next 30 years; projected growth in San Juan County is expected to increase nearly 70 percent over the same period.

Tourism, retail/wholesale trade, government and education are the biggest employers in the HRU, with ranching, logging and mining following. Per capita income in the HRU averaged about \$5,920 in 1978. Unemployment in La Plata County in 1980 was about 3.5 percent, but underemployment is a chronic problem because of the large number of highly qualified individuals who have migrated to the area, attracted more by its perceived quality of life than by employment opportunities.

Lifestyle - The Animas HRU is moderately urbanized, especially in the Durango area, but the rural mountain lifestyle still prevails. Durango is the primary trade center, and is the "gateway" to the HRU and to the the San Juan National Forest. Logging, ranching and mining are directly related to National Forest activities in the HRU, and many residents spend large amounts of their leisure time in the Forest as well.

Attitudes, Beliefs and Values - Animas HRU residents represent a wide cross-section of attitudes, beliefs and values. The community is diverse, cosmopolitan and easily polarized on issues, including those relating to natural resource management.

Social Organization - The standard social services available in most small American cities are found in Durango, including a four-year college. Because of its diverse population and economic base, the Animas HRU is not as vulnerable to social disruption from projects such as mineral or ski area development as most other communities in southwest Colorado might be.

Population and Land Uses - Population increases of the past decade have created a problem with the conversion of agricultural lands to residential and commercial uses, particularly when converted lands are adjacent to the National Forest. Loss of access and key big game winter range are two adverse effects. Recreational use of the National Forest is growing as populations increase, with much of the increased use occurring on Forest lands in the Animas HRU.

Pagosa Human Resource Unit

The Pagosa Human Resources Unit (HRU) centers on the town of Pagosa Springs, the only incorporated community within the HRU boundaries. The Continental Divide is the dominant feature on the eastern and northern boundaries of the unit. The New Mexico State line forms the southern boundary. The western boundary is formed by the hydrological divide between the Los Pinos and Piedra Rivers. The Pagosa HRU contains portions of Hinsdale and Mineral Counties and virtually all of Archuleta County.

Population, Employment and Income - Archuleta County's population increased by 33 percent between 1970 and 1980, from 2733 to 3631. State projections call for the population to double by the year 2010. Employment in the area is primarily in ranching, logging, retail trade and tourism, with much of this employment being seasonal.

Unemployment, a chronic problem, reached nearly 12 percent in 1980. The average per capita income in Archuleta County in 1980 was \$5,222.

Lifestyle - The predominant lifestyle in the Pagosa HRU is "rural mountain," with many of the residents dependent on the National Forest for their livelihood. Ranching, logging and tourism, including outfitter-guide operations, are occupations dependent on the Forest.

Attitudes, Beliefs and Values - Public awareness of the recreational environment of the National Forest is increasing with immigration to the area. There is a changing public attitude toward protecting and preserving rather than developing and using Forest resources such as timber, forage and minerals. In the future, direct conflicts can be anticipated between those who hold "preservation" attitudes and those who believe resources should be developed to meet local income and employment needs.

Social Organization - While most of the community services found in other areas are available in Pagosa HRU, rapidly increasing populations are placing strains on school systems, medical facilities, street and road maintenance and law enforcement.

Population and Land Use - Until a few years ago, Hispanics were in a majority in Archuleta County. Recent population growth has changed this mix, but the Hispanic influence is still extremely strong. Population growth has created a significant shift in land uses, the most significant being the conversion of ranchland into housing subdivisions and resorts.

PAST AND CURRENT MANAGEMENT AND SUPPLY POTENTIAL

The capacity of the San Juan National Forest to provide outputs, goods and services is directly related to management of the resource elements and support activities described in the following section. These resource elements are the same ones used in developing the National Assessment and Renewable Resources Program (RPA).

Table II-1 compares the resource production and use levels that would be provided by implementation of the Forest Plan with current management, Regional objectives, demand trends, and supply potentials (constrained and unconstrained maximums), where appropriate. The following defines the levels portrayed in the table.

Current Management

The level of outputs and uses provided by presently approved resource plans. This level indicates what could be attained on a resource-by-resource basis, looking strictly at individual resource plans with no attempts to resolve conflicts. In the case of recreation and wilderness outputs, current management is the theoretical capacity of developed sites, dispersed areas and wildernesses rather than expected use.

Regional Objectives

That portion of resource uses and outputs from the 1980 Resource Planning Act (RPA) Program that have been assigned to the San Juan National Forest by the Regional Plan.

Demand Trends

Level of outputs, uses, and services expected to be needed or desired in the future.

Supply Potential

Constrained Maximum Supply Potential - The highest level of a particular output or use that could be produced over time subject to certain constraints such as the production of minimum acceptable levels for other outputs and uses.

Unconstrained Maximum Supply Potential - The highest possible level of a given output.

Forest Plan Objectives

The estimated levels of resource uses and outputs to be provided over time by implementation of the Forest Plan.

TABLE II-1

Current Outputs, Projected Demand, Supply Potentials (Average Annual Units)

Activity	Category	Unit of Measure	Present Level 1980	Time Periods						
				1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030	
RECREATION										
	Developed (total, including downhill skiing)	Thousand Visitor Days 1/		1,799	2,061	2,061	2,061	2,061	2,061	2,061
		Current Management								
		Regional Objectives		780	900	1,200	1,500	1,700	1,700	
		Demand Trends		845	990	1,300	1,565	1,795	1,895	
		Supply Potential								
	Downhill Skiing	Unconstrained Maximum		Not Estimated						
		Constrained Maximum		Not Estimated						
		Forest Plan Objectives		850	1,170	1,620	2,000	2,420	2,650	
		Current Management		284	471	471	471	471	471	
Regional Objectives			No Targets Assigned							
Dispersed (includes off-road motorized)	Demand Trends		138	165	195	260	315	365	385	
	Supply Potential									
	Unconstrained Maximum		1,675	1,675	1,675	1,675	1,675	1,675		
	Constrained Maximum		1,250	1,250	1,250	1,250	1,250	1,250		
	Forest Plan Objectives		165	350	550	710	940	1,090		
	Current Management		24,010	24,010	24,010	24,010	24,010	24,010		
	Regional Objectives		1,000	1,100	1,400	1,800	1,900	1,900		
	Demand Trends		1,250	1,520	1,855	2,185	2,415	2,540		
	Supply Potential									
	Unconstrained Maximum		Not Estimated							
Off-Road Motorized	Constrained Maximum		24,010	24,010	24,010	24,010	24,010	24,010		
	Forest Plan Objectives		1,250	1,520	1,855	2,185	2,415	2,540		
	Current Management		1,730	1,730	1,730	1,730	1,730	1,730		
	Regional Objectives		No Targets Assigned							
	Demand Trends		63	80	100	120	140	155	165	
	Supply Potential									
	Unconstrained Maximum		Not Estimated							
	Constrained Maximum		1,730	1,730	1,730	1,730	1,730	1,730		
	Forest Plan Objectives		80	100	120	140	155	165		
	Current Management									

TABLE II-1 (Continued)

Current Outputs, Projected Demand, Supply Potentials (Average Annual Units)

Activity	Category	Unit of Measure	Present Level 1980	T i m e P e r i o d s						
				1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030	
<u>WILDERNESS</u>										
Wilderness Use	Current Management (Capacity)	Thousand Visitor Days		364.7	364.7	364.7	364.7	364.7	364.7	364.7
	Regional Objectives			No Targets Assigned						
	Demand Trends	139.0		150.0	160.0	190.0	205.0	215.0		225.0
	Supply Potential			Not Estimated						
	Unconstrained Maximum			455.7	455.7	455.7	455.7	455.7		455.7
	Constrained Maximum			170.0	193.0	236.0	264.0	297.0		328.0
	Forest Plan Objectives									
	Current Management	Thousand Acres		360.7	360.7	360.7	360.7	360.7		360.7
	Regional Objectives			No Targets Assigned						
	Demand Trends	360.7		450.8	450.8	450.8	450.8	450.8		450.8
Wilderness Management	Supply Potential			Not Estimated						
	Unconstrained Maximum			450.8	450.8	450.8	450.8	450.8		450.8
	Constrained Maximum			418.0	418.0	418.0	418.0	418.0		418.0
	Forest Plan Objectives									
	Current Management	Thousand Animals		13.0	13.0	13.7	14.0	14.0		14.0
	Regional Objectives			No Targets Assigned						
	Demand Trends	12.8		13.0	13.5	14.0	15.0	17.0		17.0
	Supply Potential			Not Estimated						
	Unconstrained Maximum			13.0	13.7	14.1	14.8	15.2		16.0
	Constrained Maximum			13.7	13.7	14.1	14.8	15.2		15.9
Deer Winter Range Carrying Capacity	Forest Plan Objectives									
	Current Management	Thousand Animals		16.8	17.1	17.5	17.5	17.5		17.5
	Regional Objectives			No Targets Assigned						
	Demand Trends	16.4		16.8	18.0	19.0	21.0	22.0		23.0
	Supply Potential			Not Estimated						
	Unconstrained Maximum			19.5	20.1	21.8	24.5	28.5		30.0
	Constrained Maximum			19.4	19.4	21.7	23.8	25.1		27.2
	Forest Plan Objectives									
	Current Management	Thousand Acres		360.7	360.7	360.7	360.7	360.7		360.7
	Regional Objectives			No Targets Assigned						

TABLE II-1 (Continued)

Current Outputs, Projected Demand, Supply Potentials (Average Annual Units)

Activity	Category	Unit of Measure	Present Level 1980	Time Periods					
				1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
<u>RANGE</u>									
Grazing Use	Current Management	Thousand Animal Unit Months ^{3/}		174.5	181.6	207.0	207.0	207.0	207.0
	Regional Objectives			164.8	169.0	169.0	169.0	170.0	170.0
	Demand Trends	170.2		177.0	183.8	217.9	224.7	228.1	231.5
	Supply Potential			Not Estimated					
	Unconstrained Maximum			175.5	175.5	201.6	204.5	210.5	223.6
	Constrained Maximum			169.5	169.5	190.8	194.1	197.6	200.2
	Forest Plan Objectives								
<u>TIMBER</u>									
Sale Offerings	Current Management (Potential Yield)	Million Board Feet		117.0	117.0	117.0	117.0	117.0	117.0
	Regional Objectives			34.2	31.0	34.0	35.0	35.0	40.0
	Demand Trends	33.8		34.6	36.0	38.9	41.8	44.7	47.7
	Supply Potential			217.6	217.6	217.6	217.6	217.6	217.6
	Unconstrained Maximum			96.4	96.4	96.4	96.4	96.4	96.4
	Constrained Maximum			40.0	40.0	42.0	44.0	46.0	61.2
	Forest Plan Objectives								
<u>WATER</u>									
Water Yield	Current Management	Million Acre-Feet		2.500	2.502	2.507	2.527	2.537	2.536
	Regional Objectives			2.405	2.414	2.432	2.451	2.469	2.488
	Demand Trends	2.500		2.620	2.740	3.000	3.290	3.600	3.950
	Supply Potential			Not Estimated					
	Unconstrained Maximum			2.510	2.529	2.540	2.550	2.572	2.582
	Constrained Maximum			2.503	2.503	2.511	2.520	2.520	2.519
	Forest Plan Objectives								

TABLE II-1 (Continued)

Current Outputs, Projected Demand, Supply Potentials (Average Annual Units)									
Activity	Category	Unit of Measure	Present Level 1980	Time Periods					
				1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
Water Meeting Water Quality Goals	Current Management	Million Acre- Feet		1.85	1.85	1.85	1.85	1.85	1.85
	Regional Objectives			1.90	2.05	2.15	2.20	2.20	2.20
	Demand Trends		1.85	2.50	2.50	2.50	2.50	2.50	2.50
	Supply Potential			Not Estimated					
	Unconstrained Maximum			1.85	1.95	1.95	1.99	1.99	1.99
	Constrained Maximum			1.85	1.85	1.85	1.89	1.89	1.89
	Forest Plan Objectives								

1/ Recreation Visitor Day = 12 hours of recreation for one person or one hour of recreation for 12 persons or any combination thereof.

2/ For comparison purposes, a hypothetical 109 thousand visitor days have been added to the 1980 developed recreation outputs to represent use at the McPhee recreation sites. These sites are planned and will be available for public use by 1985.

3/ Animal Unit Month = the amount of forage consumed by one mature cow or its equivalent in a one-month period.

RESOURCE ELEMENTS

The following discussion is intended to portray the management situation as it relates to the various resource elements. Although resource elements are discussed individually, it must be remembered that management of the Forest occurs on an integrated resource basis. Management activities affect a variety of resources, and decisions are made only after considering the entire set of ramifications involved. Similarly, single management activities are actually designed to serve a variety of resource objectives. Timber harvests, for example, are designed not only to remove timber in the most cost-efficient manner, but also to increase water yield in appropriate areas. Water developments are designed to serve the needs of certain wildlife species as well as domestic livestock. Roads are located to efficiently transport logs from the timber sale area to the mill, but these same roads are also designed to provide access for hunting, firewood gathering, and recreation.

Other inter-relationships are more separated chronologically. For example; timber harvesting, when it improves the balance of successional stages of vegetation, can improve wildlife habitat diversity. Improved diversity leads to a gradual increase in populations of certain animal species, which in turn increases recreation opportunities for viewing, photographing, and hunting these animals. This series of events may take several years to come to fruition, yet it may be entirely the result of a single management activity.

Therefore, resources that are discussed individually below are really part of a very complex system with numerous interactions. They are described individually only to emphasize important aspects of the current situation in some type of organized framework. These elements must be conceptually combined in order to understand the overall current situation on the Forest as well as how the Forest Plan relates to it.

Recreation

Recreation is one of the major uses of the San Juan National Forest. An estimated 1.2 million recreation visits occurred in 1980, which provided approximately 1.6 million recreation visitor days (RVD's). Use is distributed among the following activities.

Dispersed Recreation - Specific dispersed recreational opportunities available on the San Juan National Forest include hiking, backpacking, picnicking, camping, gathering forest products, trail-biking, driving for pleasure, fishing, hunting, boating, rafting, mountain climbing, swimming, horseback riding, general leisure and sightseeing, cross-country skiing, snowmobiling, snowshoeing, ice fishing, snow play, sledding and tobogganing.

The San Juan National Forest has approximately 1,867,000 acres that are available for dispersed recreation activities. Non-wilderness dispersed recreation is estimated at 878,000 recreation visitor days per year and is presently the largest and fastest growing form of recreation on the San Juan National Forest.

Trails - The San Juan National Forest trail system consists of approximately 305 miles within three wildernesses, and 850 miles of trails outside wilderness. Trail use outside wilderness is predominantly recreation oriented, although approximately 200 miles are used primarily for stock trails, fire access, or other miscellaneous uses.

In 1979, two trails on the Forest were established as National Recreation Trails (NRT) under the National Trails System Act. The Calico NRT on the Dolores District is 6.5 miles in length, and the Highline Loop NRT on the Mancos District is 20 miles long.

About 120 miles of proposed Continental Divide National Scenic Trail (CDNST) corridor occurs on the San Juan National Forest. Much of this trail crosses numerous times between the Rio Grande and San Juan National Forests. Projected demand for trails is expected to increase corresponding with the demand for dispersed recreation opportunities.

Developed Recreation - The 60 "public sector" sites on the San Juan National Forest have a total use of about 391,000 RVD's per year with a combined total theoretical capacity of 2,261,000 RVD's. These sites include 37 campgrounds, 7 picnic areas, 4 boating sites, 2 group campgrounds, 6 developed trailheads, and 5 observation or interpretive sites, including the Chimney Rock Archaeological Area. Season of use runs from May 15 through November 15. Fees are charged on campground and group picnic sites meeting Land and Water Conservation Fund Act criteria. Presently, 33 of the 60 sites are designated as fee areas. In 1980, returns to the U. S. Treasury from these fees were \$40,700.

Nearly all "public sector" sites are currently maintained to complement the natural environment and provide adequate visitor facilities, such as toilets, tables, fire rings, and roads. The largest suppliers of developed recreation outside the San Juan National Forest are private campgrounds and Mesa Verde National Park with an estimated total theoretical capacity of 4,580,000 RVD's. Developed recreation use on non-National Forest sites is expected to increase from 35 percent of present theoretical capacity to 80 percent by the year 2030.

Demand for developed recreation is expected to increase as local population increases. As travel expenses increase, use of developed sites by local residents will also increase.

Ski Areas - There are two operating ski areas on the San Juan National Forest, Stoner and Purgatory. Current annual use at these areas is 138,000 RVD's. Stoner is a small weekend-type ski area presently operated by a nonprofit club. It has two T-Bar lifts which are partially located on the Forest (27 acres) and a small rope tow on private land, with a total capacity of 380 skiers at one time. During the 1979-1980 season, Stoner had 4,544 skier visits. Annual use at Stoner has not increased significantly for several years.

Purgatory, the only destination ski resort in the San Juan National Forest, is much larger than Stoner. During the 1979-1980 season there were 271,500 skier visits. Skier use averaged 51 percent of capacity on weekdays and 76 percent of capacity on weekends. The capacity of 3,200 skiers per day was exceeded 13 times during the season. Approximately 60 to 70 percent of the skiers are from out-of-state, mostly from New Mexico, Texas and Arizona. The market for out-of-state skiers is favorable, as Purgatory is the only major ski area in Colorado that can be driven to from the southwestern states without crossing a major mountain pass. Commercial jet aircraft capability at the La Plata County Airport further enhances the attractiveness of Purgatory Ski Area.

Purgatory currently has five double chair lifts serving approximately 500 acres of trails. Proposed expansion would add two more chairlifts and increase the trail area served to about 700 acres. In 1979, Purgatory installed an "alpine slide" which involves riding a sled-like vehicle down a fiberglass chute. This attraction has increased summer use of the area.

Demand for downhill skiing generally exceeds supply. Consistent demand, in spite of energy shortages and higher lift ticket prices, suggests that substantial increases in capacity would be paralleled by increases in use. Use by 1995 will more than double if current trends continue.

There are 15 inventoried potential ski area sites on the Forest. There is an identified interest by the private sector in at least three of these sites: East Fork, Windy Pass, and Grayrock-Cascade.

Cultural Resources - Many Anasazi ruins are scattered throughout the Forest, representing various periods of Anasazi history. Much evidence of early development in the San Juan Mountains, such as old mines, pack trails, toll roads, and narrow gauge railroad beds, can also be found.

Prior to any ground-disturbing management activities, project sites are surveyed for archaeological and historic significance. Protective measures are taken when a cultural resource site is found. Over 250,000 acres, or approximately 13 percent of the San Juan National Forest has been systematically inventoried for archaeological resources.

The Chimney Rock Archaeological Area and the Durango and Silverton Narrow Gauge Railroad are currently the only two areas on the San Juan National Forest that are listed on the National Register of Historic Places. The Durango and Silverton Narrow Gauge Railroad is also a National Historic Landmark. Only Chimney Rock is directly managed by the Forest. The Spring Creek drainage was recently nominated to the National Register listing for its archaeological importance.

Visual Resources - The San Juan National Forest is characterized by outstanding scenery. Interest in management of the visual resource is increasing.

Approximately 48 percent of the Forest has been altered by man to the degree that it is visually evident to the Forest visitor. Fifty-two percent of the Forest has had very minor to no alteration. There is only an estimated eight percent that visually dominates and contrasts with the natural appearing landscape. Examples are developments such as roads, utilities, mineral activity, timber clearcutting, and developed recreation sites.

Demands for, and concerns about scenic quality of San Juan National Forest lands viewed from recreation sites and major travelways will become increasingly important. Visual resource management techniques will continue to be applied to all projects in the future, with specific emphasis on those areas identified by the Forest Plan as high in scenic quality or recreation use.

Wilderness

The San Juan National Forest presently contains 360,684 acres of designated wilderness. This is about 20 percent of the Forest, which is distributed among the Weminuche, the Lizard Head, and the South San Juan Wildernesses. The South San Juan Wilderness Expansion, Piedra and the West Needle Wilderness Study Areas comprise an additional 90,100 acres to be studied for possible inclusion into the National Wilderness Preservation System.

Existing Wilderness - The Weminuche Wilderness now contains 463,324 acres (294,284 acres on the San Juan National Forest). It was originally designated in 1975 although it had been managed since 1932 as the San Juan Primitive Area. The Weminuche stretches along the Continental Divide from Stony Pass on the north to near Wolf Creek Pass on the south. Approximately 497 miles of light to heavy use trails permit access to the area. In the past decade, recreation use has risen to almost 200,000 RVD's in 1980 with areas such as Chicago Basin, Johnson Creek, and Flint, Goose, Trout, Ute, and Emerald Lakes receiving heavy recreation use. Direct controls such as camping restrictions have been necessary on some areas around Emerald Lake. The Weminuche is very popular for commercial outfitter-guides who generate over 10 percent of the annual use in the form of hunting, fishing, photography and sight-seeing trips. There is low interest both in mineral exploration and oil and gas leasing in the area.

The 40,000-acre Lizard Head Wilderness (21,400 acres on the San Juan National Forest) was created out of parts of the Wilson Mountains Primitive Area and adjacent areas by an Act of Congress in December 1980. Impressive rock outcrops and high mountain terrain with peaks over 14,000 feet characterize this area. Cirque lakes and swift flowing streams are also present and some contain cutthroat, rainbow, and brook trout. Extensive vistas and large areas of alpine and spruce-fir vegetation are present. Approximately 19 miles of trails provide access for light to moderate recreation use. There is also low interest in mineral exploration and high interest in oil and gas leasing in the area.

The South San Juan Wilderness, designated in 1980, crosses the Continental Divide in the San Juan Mountains. The 133,463 acre area (45,000 acres on the San Juan) contains bottomlands, canyons, glaciated uplands, uneven mountains and high hills. Some of the area is above timberline. The Conejos, San Juan and Blanco Rivers originate in the area. Vegetation includes a variety of grasses, shrubs, spruce, fir, aspen and various alpine plants. One hundred sixty-four miles of trails provide access for hunting, fishing, sightseeing, and grazing. The area is currently receiving light recreation use which is expected to rise as a result of official wilderness designation. There is low interest in both mineral exploration and oil and gas leasing in the area.

Future wilderness use can be expected to rise during the next decade at nearly the historic rate of increase. Changes in this rate beyond the next few years will depend on factors such as travel costs and leisure time.

Under existing legislation mineral exploration and development can continue until December 31, 1983, at which time the lands will be withdrawn from further mineral entry and leasing. Grazing use, on the other hand, is expected to remain steady or increase slightly. On some vegetation types, grazing capacity will decline due to natural succession of trees into existing forage producing areas.

Wilderness Study Areas - In 1977 the Forest Service began a Nation-wide Roadless Area Review and Evaluation (RARE II) to identify roadless and undeveloped areas within the National Forest System which were suitable candidates for inclusion in the National Wilderness Preservation System. Thirty-eight areas were inventoried on the San Juan National Forest; over 300 areas were inventoried in Colorado.

The Colorado Wilderness Act of 1980 (P.L. 96-560) was a direct result of RARE II. In the Act, three areas on the San Juan National Forest, West Needle, Piedra, and South San Juan Wilderness Expansion (Montezuma Peak - V Rock Trail) were established as Wilderness Study Areas. This act requires the Secretary of Agriculture to review the study areas and make recommendations as to the suitability or unsuitability of inclusion into the National Wilderness Preservation System by December 31, 1983.

Fish and Wildlife

Wildlife - In 1980, the San Juan National Forest provided 107,600 RVD's of hunting, 91,600 of them for big game. Nonconsumptive wildlife use constituted 10,000 RVD's. Wildlife related recreation made up approximately seven percent of the total recreation use of the San Juan National Forest.

The variety of topography and climate that occurs within the San Juan National Forest provides habitats for many species of mammals, birds, reptiles, amphibians, and fish. A complete species list and summary of habitat relationships is included in the wildlife data input to the San Juan National Forest Land and Resource Plan on file at the Forest Supervisor's Office, Durango.

Estimated populations of the primary species of game animals on the San Juan National Forest are indicated in the following table. No specific data on population numbers of small game and non-game species is available.

Populations of Game Species

Species	Estimated Population 1980
Bighorn sheep	220
Black bear	1,200
Elk	9,700
Mountain lion	70
Mule deer	16,250
Turkey	330
Mountain goat	80

There are approximately 650,000 acres of big game winter range on the San Juan National Forest, of which 95,000 acres are classified as key winter range. Winter range is especially important since winter ranges on adjacent private lands are being lost or impacted as a result of developments and other conflicting uses.

Consumptive and nonconsumptive uses of wildlife resources are expected to increase and to meet or exceed supply. Small game hunting will probably become more popular requiring additional maintenance and improvement of small game habitats. The Forest Service will be called upon to improve the quality of big game winter range on the San Juan National Forest as more adjacent winter range is lost to development. Nonconsumptive uses of wildlife such as viewing, bird watching and photographing will increase as consumptive uses become more restricted.

Fish - In 1980, cold-water fishing on the San Juan National Forest provided 136,700 RVD's. Total fish-related recreation made up about nine percent of the total recreation use of the Forest.

There are presently 16 species of fish on the Forest, of which seven are classified as game fish. These are brook, rainbow, brown, cutthroat, and native trout, kokanee salmon, and northern pike.

There are approximately 1,215 miles of perennial fishing streams, 94 natural lakes and 10 reservoirs on the San Juan National Forest. A majority of stream habitat is of poor quality because of steep gradients and high yearly fluctuation of flow. Current inventories indicate approximately 236 miles of stream where improvement of habitat could be accomplished on an cost-effective basis. The majority of the natural lakes on the San Juan National Forest occur in wildernesses. There are only a few opportunities to improve cold-water fish habitat in lakes or ponds.

In the future, the Forest Service will probably be called upon to provide fish habitat in low elevation, highly productive ponds and lakes. Fishing pressure will likely increase beyond supply, especially on waters outside wildernesses. As fishing pressure continues to increase, specific fish habitats in wilderness may become over-utilized because of their low productivity potential.

Threatened and Endangered Species - The Endangered Species Act of 1973 requires that all Federal agencies protect and manage threatened and endangered species and their habitats. The San Juan National Forest has the following Federal or State designated threatened or endangered wildlife species:

Common Name	Latin Name	Designation
American peregrine falcon	<u>Falco peregrinus</u> <u>anatum</u>	endangered/Federal
Bald eagle	<u>Haliaeetus leucocephalus</u> <u>alascanus</u>	endangered/Federal
Colorado River cut-throat trout	<u>Salmo clarki</u> <u>pleuritius</u>	threatened/State
River otter	<u>Lutra canadensis</u>	endangered/State
Grizzly bear*	<u>Ursus arctos</u>	threatened/Federal
Wolverine*	<u>Gulo gulo</u>	endangered/State

*Uncertain existence on San Juan National Forest

At present, there are 21 prime inventoried sites on the San Juan National Forest that have been recommended as essential habitat for peregrine falcon. One of these sites is an active eyrie and another is being used as a hack site for reintroduction purposes. Six areas of winter roosting sites for bald eagles have been identified. These areas are primarily on private lands adjacent to or intermingled with the San Juan National Forest, including downtown Durango.

A cooperative research study with the Colorado Division of Wildlife is presently under way on nearly 80,000 acres to determine if grizzly bear exist on the San Juan National Forest and to classify possible habitat. Habitat for the river otter has been identified, and a multi-year transplanting program is in progress.

There are no known threatened or endangered plant species on the San Juan National Forest although Mesa Verde cactus and Knowlton's hedgehog cactus have been found about 10 miles from the Forest boundary.

Certain trends can be expected in the future. For example, a sizable portion of the general public will continue to demand that threatened and endangered species and their habitats will be maintained or improved. If the determination is made that grizzly bear do exist on the San Juan National Forest, the Forest Service may be required to alter its management of grizzly bear habitat. Demands for commodity products will continue to be in conflict with certain threatened and endangered species habitat requirements.

Range

Of the 1,867,782 acres of San Juan National Forest, about 866,000 acres are classified as capable and suitable livestock grazing rangeland. There are about 145,500 acres in unsatisfactory range condition. It is the goal of range management to maintain all rangeland in satisfactory range condition.

Grazing of livestock on the San Juan National Forest is a major use. Much of the local economy is dependent on ranching and stock-raising. The total number of livestock grazing on the Forest, about 31,000 cattle and 51,000 sheep in 1980, represents one-third of the total cattle and sheep in the five-county area. Also, there were about 3,400 horses, mostly being used for recreation activities, grazing on the Forest. The majority of the cattle are permitted on the Forest from mid-May to mid-October. The majority of the sheep are permitted from early July to mid-September.

There are 219 livestock grazing allotments on the San Juan National Forest broken down as follows: 145 cattle and horse allotments, and 74 sheep and goat allotments. Thirty-two of the allotments are vacant; 28 are available to be stocked and grazed by livestock; and four are currently not available for restocking because of restoration projects.

Forest-wide stocking is within estimated carrying capacity; however, 22 cattle and horse allotments and 6 sheep and goat allotments are considered to be either overstocked or have management problems. The overall trend is that range conditions are improving across the Forest. The number of cattle grazing on the Forest has remained fairly steady over the past few years; however, because of variations in the sheep market, numbers of sheep have fluctuated greatly.

The demand for permits for cattle grazing is expected to remain high and will exceed available supply. Demand for sheep permits is expected to continue fluctuating over time but will rise to exceed supply. The dependency on Forest lands for grazing will probably increase as more private land is converted from rangeland to other uses. Conflicts will increase between grazing and other resource uses.

Timber

During the period from 1915 to 1980, over 1,800 million board feet (MMBF) of timber have been harvested from the Forest. From 1960 to 1980, average annual harvest has been 53 MMBF per year, ranging from 98 MMBF per year in 1969 to 22 MMBF in 1980.

Average annual sale of timber has been declining as a result of depressed market conditions for lumber and other wood products, increased costs, and smaller diameter trees. The Montezuma Plywood Company in Dolores, with a capacity of 30 MMBF annually, closed in 1976. San Juan Lumber Company's operation in Pagosa Springs, which used 25 MMBF annually, has not operated since 1978. San Juan's operation in Durango currently uses only 10 MMBF, which is down from 18 MMBF in 1978.

The annual requirements of sawmills dependent on the San Juan National Forest are approximately 30 to 42 million board feet per year. This estimate is based on mill capacities, past purchases, and stated needs of sawmill operators.

Since 1960, Engelmann spruce, true fir, and Douglas-fir have been the major species harvested on the Forest, accounting for 62 percent of the harvest, followed by ponderosa pine (28 percent) and aspen (10 percent).

The timber resource is presently being regulated on a non-declining yield basis. This means that yield of wood fiber for any decade will not be less than the yield during the previous decade. This also implies that the average annual amount cut cannot exceed the long-term capability of the Forest to regenerate wood fiber on a sustained yield basis. Current average annual cut is below that level and is aimed at supporting local dependent industries.

Commercial harvest techniques have generally been limited to tractor logging, primarily because the low volume cut per entry on most sales has rendered high cost logging systems economically infeasible. Tractor logging is limited to slopes less than 40 percent.

Timber harvests are designed to achieve multiple use objectives, including water yield, range and wildlife habitat improvement, fuel reduction, insect and disease control. Regeneration systems called for in the 1976 Timber Management Plan include clearcut and shelterwood in the spruce-fir and Douglas-fir types and clearcutting in the ponderosa pine and aspen types. Not all of these regeneration systems are scheduled in the first Plan period; however, they are scheduled in later periods when the stands are to be regenerated.

From 1962 to 1980, 40,568 acres have been planted, with some acres having been replanted. As a result of poor regeneration success, ponderosa pine sites which are presently non-stocked or on greater than 30 percent slopes are considered unsuitable for timber production. For Engelmann spruce, harvest methods were changed from clearcutting to shelterwood to enhance natural regeneration, except that small clearcuts using aerial logging systems are permitted.

Demand for timber resources is expected to increase at a moderate rate, except for fuelwood, for which demand will be high. There will be strong pressure from outside the local area for the Forest to contribute more to the national wood supply. It is anticipated that both market and non-market demands will increase and that in some cases demands will conflict.

Water

Watersheds on the San Juan National Forest generate approximately 15 percent of the flow of the Colorado River as measured at Lee's Ferry, Arizona although they occupy only three percent of the drainage area. Nearly 80 percent of the flow of the San Juan River at Bluff, Utah originates on the Forest. Total average annual yield is 2.5 million acre-feet.

The San Juan National Forest provides water for 19 irrigation reservoirs within or adjacent to its boundaries. Many of the streams of the Forest are impacted by diversions and are drying up. Demand for water presently exceeds supply, a trend that is expected to intensify in the future. Water yields from the San Juan National Forest can be increased by vegetation treatment and snow management activities, but only 90,000 additional acre-feet per year could be provided without degrading water quality.

Minerals and Geology

The geologic forces responsible for the topographic conditions on the San Juan National Forest also led to a high degree of mineralization. As a result, mineral resources are prevalent.

Locatable Minerals - Placer and lode gold, along with silver, copper, lead and zinc have been recovered from the Forest since the 1870's. More recently, uranium has been extracted and exploration for molybdenum has been carried out.

Other locatable minerals having the potential of being economically recoverable include tungsten, thorium, and vanadium. Increasing use of coal to generate electrical power in the Four Corners Region may lead to the development of limestone as an emission-scrubbing agent. Minor amounts of iron, manganese, nickel, cadmium, mercury and sulfur have also been produced on the Forest.

Exploration, development, and production of locatable minerals is likely to increase in the 1980's. The outlook for increased exploration and development of precious and base-metal ores is mixed. Increasing political pressure to develop domestic resources may spur development of economically marginal operations.

The long-range outlook for exploration and development of molybdenum and vanadium resources is good, but the outlook for tungsten and uranium development is less favorable.

Leasable Minerals - Since 1920, approximately 80 exploratory oil and gas wells have been drilled on the Forest, most of which were either dry or had amounts too low to be economically extracted. Several proven reserve fields lie along the southern and southwestern boundaries of the Forest, and five producible natural gas wells on the Pine and Dolores Districts were discovered in 1981-82. Production is expected following the construction of gathering pipelines. Virtually the entire western third and southeastern third of the Forest are covered with existing oil and gas leases or lease applications.

The United States Geological Survey has inventoried four areas as being prospectively valuable for geothermal resources:

- West Fork area -- 26,300 acres
- Pagosa Springs area -- 26,300 acres
- Dunton-Rico area -- 132,109 acres
- Trimble-Pinkerton area -- 130,313 acres

To date no geothermal leases have been issued. Interest in developing this resource is limited by the generally low temperature gradient of geothermal waters.

Oil companies are planning a joint CO₂ project which includes the Doe Canyon area on the western edge of the Forest. The corridor for a 480-mile transmission pipeline to Texas has been approved, and construction should commence when the necessary permits are issued. Interest in CO₂ has been expressed by other companies and several new exploratory wells are planned to test for CO₂ east of the present project field.

Two areas of the Durango Known Recoverable Coal Resource Area (KRCRA) lie on the San Juan National Forest. A detailed assessment is contained in Appendix I of the draft EIS.

Exploration and development of leasables, especially fossil fuels, is expected to increase sharply. The southern portions of the Pine and Pagosa Districts and the western part of the Dolores District will probably bear the major impacts of this activity. Development of geothermal resources on the San Juan National Forest will be limited to small-scale uses such as space heating and spas, resulting in minimal impacts within geothermal resource areas. Exploration for oil and gas

will increase, and technological advances in geophysical interpretation and data-gathering methods will result in more activity and heavier impacts in favorable areas. Applications for coal leases and attendant development are anticipated on the southern portions of the Pine and Pagosa Districts.

Salable Minerals - Seventy-six aggregate sources of salable minerals have been inventoried, most of which have not been developed. Those developments that have taken place are short-term and site specific, mostly for Forest, County, and State road projects. A few non-competitive sales of lichen-covered ("moss") rock have been made. The outlook for salable minerals on the Forest is for an increase in applications for sand, gravel and building stone corresponding to increases in the number of construction, mining, and housing projects in the 1980's.

Human and Community Development

The Forest has been actively engaged in a wide variety of manpower and youth training programs. A summary of the major programs follows:

Comprehensive Employment Training Act (CETA) Program - This program provides employment to youths between the ages of 15 and 18. The average annual participation has been 8 CETA enrollees, nearly all of whom are women or minorities.

College Work-Study Program - This program is designed to provide work experience and employment to low income college students. At most 15 students were working under this program although presently there are only two. Many of these students are women and minorities.

Volunteers in National Forest Program - This program, authorized in 1972, has been used extensively to accomplish campground host work and archaeological surveys. In 1980, there were 36 volunteers working for the Forest.

Senior Community Service Employment Program (SCSEP) - Currently, there are 18 enrollees, 55 years of age or older who meet low income requirements specified by the Department of Labor. Many of these individuals are women and minorities.

The outlook for manpower and youth training programs on the San Juan National Forest is not encouraging. Many of the programs are Federally funded, with monies coming from other government agencies. The current economic and administrative climate in the country is such that monies have been, and will likely continue to be, significantly reduced.

SUPPORT ELEMENTS

Lands

Special Land Uses - The San Juan National Forest is available for occupancy when special uses further the public interest and are compatible with Forest Service goals and objectives. Occupancy is authorized

through special land use documents. Factors limiting authorization are availability and suitability of land for the proposed use and compatibility with other National Forest management programs.

Special land use applications are increasing. Eighty-eight non-recreational documents were issued prior to 1960; 183 were issued from 1960 to 1969; and 205 were issued from 1970 to 1980. There are also 133 recreation-related special use permits operational at present.

Special land uses with significant impacts on the Forest include corridors for oil and gas transmission pipelines (29.7 miles), electric power transmission and distribution lines (165.1 miles), water transmission lines and ditches (104.3 miles), and telephone lines (117 miles).

Demand for special uses increase substantially and issuance of special use occupancy documents will become more difficult due to increasing conflicts with other Forest management activities.

Land Ownership - Land exchanges and purchases have been moderate. Land and Water Conservation Funds (L&WCF) have been used to purchase a number of private lands for outdoor recreation purposes, but this program has been the only source of funding for land purchase.

Occupancy trespass involves the identification, investigation, and resolution of non-mineral related unauthorized occupancy and use of the San Juan National Forest. There are many suspected occupancy trespasses where adjacent land owners have constructed improvements on National Forest property. Where property lines are not well identified, the Forest Service has increased efforts to accurately survey boundaries.

There are an increasing number of subdivision developments adjacent to National Forest System lands, with associated conflicts over responsibility for range fences along property boundaries, access to the Forest, and loss of key winter habitat for wildlife. Owners of adjacent properties often desire land exchanges with the Forest Service to reduce subdivision costs, resolve access difficulties, and reap investment benefits. Exchange activity has been low due to uncertain funding and the small number of proposed exchanges which would benefit the public.

Land ownership adjustments are coordinated with the plans and programs of other Federal Agencies, and state and local governments. The San Juan National Forest and the Bureau of Land Management (BLM) have proposed a major boundary adjustment which is now awaiting Congressional approval. This adjustment was initiated in 1975 and encompasses 31,607 acres of National Forest land and 25,559 acres of BLM land. There are three Wilderness Study Areas involved in the boundary adjustment. If these are transferred to the Forest Service, the studies will be continued by the Forest Service and a recommendation on suitability or unsuitability for wilderness will be made to Congress.

Land ownership adjustment proposals from private and other government agencies are expected to increase in the immediate future.

Rights-of-Way - The intermingled public and private lands within the boundaries of the San Juan National Forest have resulted in many access problems. Many areas are unavailable for public use because of insufficient access. More access to the Forest is a major public issue because private landowners often enjoy nearly exclusive use of public land through control of access.

The San Juan National Forest presently acquires about five to six rights-of-way (ROW) annually. The current emphasis is to acquire ROW's where access problems are the greatest. Private landowners are reluctant to grant ROW's to the Forest Service unless there is a significant benefit to the landowner. When a ROW is in the public interest, and the property owner is unwilling to grant an easement, the right of eminent domain can be used.

The public demand for public ROW access will increase as other Forest uses increase. Resistance to grant public ROW's is likely to also increase.

Withdrawals - Land withdrawals on the San Juan National Forest are composed of Federal Energy Regulatory Commission withdrawals for transmission rights-of-way, Bureau of Reclamation withdrawals, and Congressional withdrawals for certain activities within wilderness areas and proposed Wild and Scenic River corridors. These withdrawals comprise 463,315 acres on the Forest.

A review and assessment of existing withdrawals is required by Section 204 of the Federal Land Management and Policy Act. Present direction to all agencies is to review withdrawals by 1991, and revoke those which create unnecessary encumbrances on the land. A summary of proposed mineral withdrawals and revocations can be found in Appendix E.

The only new withdrawals contemplated are for administrative sites, Natural Research and Archaeological Areas, and those involving other major investment areas which require protection.

License and Permits - This section covers licenses and permits issued by another Federal agency for surface use of National Forest lands. Currently there are two projects on the San Juan National Forest that have either a license or a preliminary permit for a proposed project. These permits, issued by the Federal Energy Regulatory Commission (FERC), are for the :

- Colorado-Ute Electric Association - Tacoma-Ames Project No. 400 (license); and
- Ptarmigan Resources and Energy, Inc. - Lemon Reservoir Project No. 2938 (preliminary permit)

The Tacoma-Ames license was issued March 19, 1936. The project has been active for several years developing hydroelectric power. A major expansion of the facility was made in 1980-1981, and there is currently a request for renewal of the license with the Federal Energy Regulatory Commission.

The Lemon Reservoir project was issued a preliminary permit that will expire in 1982. It is not known at this time if the proponent expects to file an application after 1982.

Except for the recent expansion of the Tacoma-Ames project, there are no other development proposals. However, with the interest in and the associated rising costs of energy development, there could be additional studies, particularly with water impoundment projects. An example of this is the McPhee pumpback storage project near Hoppe Point on the Dolores Ranger District. Although in the preliminary stages, the project appears feasible. If so, it would require a license under the authority of the Federal Energy Regulatory Commission.

Utility and Communication Facilities - Utility and communication facilities on the Forest are authorized by special use permit or easement. They include oil and gas pipelines, powerlines, telephone and telegraph lines, electronic sites, and a railroad easement. The locations of the major existing utility uses as well as corridors within which future major uses will be considered are shown on the Forest Plan map.

The present trend of increasing utility uses is expected to continue through the planning period.

Special Areas - Special areas are designations of portions of the Forest for specific purposes such as research natural areas, wild and scenic rivers, and archaeological areas.

Research Natural Area - The San Juan National Forest has one designated research natural area, Narraguinnep; and two potential areas, in Williams Creek and Spring Creek.

The Narraguinnep Research Natural Area has 1,928 acres and is representative of the mesa country of southwestern Colorado. Located on the Dolores Ranger District, the vegetation consists of ponderosa pine, pinon pine, juniper and oakbrush types. Due to topography, virgin conditions prevail, and livestock is excluded through the use of fences and natural barriers.

Williams Creek Area is a potential research natural area of approximately 420 acres of white-fir forest on the Pagosa District, which appears to be suitable for designation as a research natural area.

The Spring Creek Archaeological District is a potential research natural area for the study of prehistoric, aboriginal ecosystems. It is an area of 3,360 acres which has been nominated for listing in the National Register of Historic Places.

Future demands for research natural areas should remain at current levels, or slightly increase. The existing and proposed sites should be adequate for the next 10 years.

Wild and Scenic Rivers - The 1975 Wild and Scenic Rivers Act designated three rivers on the San Juan National Forest for potential addition to the National Wild and Scenic Rivers System. These are the Dolores River, the Piedra River, and the Los Pinos River.

The Forest has completed Wild and Scenic River Study Reports and Environmental Impact Statements on all three rivers. The Dolores River Study has been submitted to Congress for action. The Los Pinos River Study and the Piedra River Study are presently undergoing review at the National level.

All of these studies were completed with the cooperation of the State of Colorado. For the Dolores River, the recommendation is that 105 miles be designated as a component of the National System of Wild and Scenic Rivers with a classification of 33 miles as "Wild," 41 miles as "Scenic," and 31 miles as "Recreational." The Colorado Department of Natural Resources also determined that the 35 mile West Dolores River be considered for an eligible Recreational River classification. For the Los Pinos River, approximately 54 miles meet criteria for possible inclusion as a component of the National System with a Wild River classification. For the Piedra, approximately 50.9 miles meet criteria for possible inclusion in the National System with a classification of 32.5 miles as "Wild," 12.9 miles as "Scenic," and 5.5 miles as "Recreational."

The San Juan National Forest was also directed to make evaluations of the San Juan River and Animas River for possible inclusion in the National System of Wild and Scenic Rivers. Neither river was determined to be eligible. (See Appendix J of the draft EIS - "Determination of Animas and San Juan Rivers for Wild and Scenic Rivers Eligibility.")

The demand to protect and maintain free flowing rivers will increase.

Chimney Rock Archaeological Area - Chimney Rock Mesa, located off Colorado Highway 151 near Pagosa Springs, lies between the Piedra River and Stollsteimer Creek and features a heavy concentration of Anasazi ruins.

In 1970, 3,160 acres were designated as Chimney Rock Archaeological Area and entered in the National Register of Historic Places. Various management plans have since been proposed for the area, some providing significant development along Highway 151 at the base of the mesa, including a parking lot, visitor information center, and picnic facilities. Consideration has also been given to joint development with the Southern Ute Tribe, which would encompass the nearby Ute-owned Capote Lake area. The Southern Ute Tribe owns land in and around the Chimney Rock area and would like to participate in and benefit from the development of Chimney Rock as a tourist-oriented attraction. Development of the Chimney Rock site was halted due to the discovery of a pair of peregrine falcons, an endangered species, which resides near the ruins.

Today, Chimney Rock Archaeological Area is accessible only by dirt road from Highway 151, which is closed to the general public. During the summer, the Forest Service conducts guided tours of the ruins, which are organized and conducted in cooperation with the Pagosa Springs Chamber of Commerce.

The demand for public access to the Chimney Rock Archaeological Area will increase. The Southern Ute Tribe has expressed a continuing interest in development of the area.

Soils

Soils within the San Juan National Forest vary considerably with landform, geology and the erosional and depositional processes. Soils are presently forming in sandstones, shales, metamorphic and igneous rocks, as well as glacial and alluvial deposits. Landforms include mesas, cuestas, canyons, glaciated mountains, alpine features and some alluvial terraces.

The objective of soil management on the Forest is to match management activities to the capability and suitability of the soil in the interest of maintaining long-term productivity. This can be done quite well where the soil has been inventoried and soil characteristics are known, although only about one million acres have been inventoried thus far.

Soil management problems include soil erosion and compaction. Accelerated soil erosion decreases soil productivity, although management activities can be designed to contain soil erosion within tolerance limits. Soil compaction resulting from heavy equipment use on moist, fine textured soils also affects soil productivity. Activities such as skidding logs, hauling logs, and construction must be timed to when soils can support heavy loads.

Soil management services are provided on projects judged to have potential for soil resource damage. These include timber sales, roading, mineral operations, and range management. Management services typically include recommendations to reduce soil impacts.

Continuing concern for soil productivity will require ongoing soil inventories and increased management analysis.

Facilities

Structures and Administrative Sites - The Forest Service currently owns 5 office buildings, 18 dwellings, 4 lookout towers, 14 work centers, and 30 other miscellaneous buildings, for a total of 71 buildings utilized in managing the San Juan National Forest. Additional office space is acquired through General Services Administration (GSA) leases as needed. The Supervisor's Office and the Animas Ranger District Office are housed in a GSA-leased building in Durango. The Dolores Ranger District Office, although not under a GSA contract, is also leased. Construction is limited to warehouses and special project buildings. Current plans call for a new warehouse in Dolores. Use of government furnished housing by Forest Service employees is increasing.

Most of the office and work facilities on the Forest are over 40 years old. Most facilities are used to capacity and, in some instances, are overcrowded. Many are not fuel-efficient, either in location or design. Most of the buildings need to be retrofitted for energy efficiency.

There are no solid waste disposal sites on the Forest.

There are 65 road bridges or major culverts on the San Juan National Forest, representing a \$4,000,000 capital investment. There are also 34 trail bridges, which cost approximately \$850,000 to construct.

There are over 300 dams on the Forest, but only 13 of these are over 20 feet in height. Only one of these, at Henderson Lake, is owned and maintained by the Forest Service. There are currently no plans for constructing additional dams over 20 feet in height.

There will be an increasing need to reconstruct existing buildings and recreation sites due to their age and condition. Further bridge work will involve rebuilding and upgrading existing structures. There are proposals for constructing additional dams on the Forest and, as demands for water increase, additional storage capacity will be proposed. The demand for solid waste sites on the Forest will also increase as population and land values increase.

Transportation - The San Juan National Forest has 2,218 miles of Forest development roads, 738 miles of which are arterial and collector roads and the remainder are local. Other Federal, State and County roads also provide access to the Forest. In addition to these roads, a significant number of primitive roads have been created by off-road vehicle (ORV) use. Trails are discussed under recreation on page II-14.

Much of the road system now requires, or will soon require, reconstruction to provide safe and maintainable standards. Some roads causing erosion problems or which cause undesirable impacts due to human use on other resource uses, such as recreational activities or wildlife, have been obliterated (returned to production) or put-to-bed (stabilized). More roads are scheduled for such action.

The road system is managed through specific management objectives and traffic regulations. Management of one road may consist of closing the road to public use while management of another road might consist of allowing public use year around. Currently, approximately 40 percent of the road mileage is maintained only to a standard necessary to protect the road investment and the surrounding resources. Reasons for this level of travel management include economics and undesirable impacts of human use on resource uses such as recreational activities and wildlife. Seasonal closures are also necessary on other roads to prevent resource damage or damage to the roadbed.

Areas where indiscriminate off-road driving results in erosion or aesthetic problems and areas where traffic is legally prohibited have been closed to off-road vehicle use. Areas where ORV use has not resulted in resource conflicts are open to vehicular traffic and ORV use. The present travel management status is displayed on the San Juan National Forest travel map.

Demand for use of Forest roads is significant. Several roads are now used at such a level that any increases in traffic volume will cause congestion and safety problems. Four-wheel drive interests want more opportunities for off-road and primitive-road use. Owners of private inholdings want exclusive access to their property. Sightseers want more roads with better driving surfaces. Although there is demand for numerous and varied road opportunities, some users want fewer roads.

Protection

Fire - The fire management program in the San Juan Basin of southwestern Colorado is a coordinated interagency effort involving Federal, State and local agencies. The overall fire management objective is to provide a cost-effective program which responds to land and resource management goals and objectives. This includes fire protection and use.

Since 1978, there have been two separate fire suppression objectives for the San Juan National Forest. The first, applied on all but 305,000 acres of the Forest, is to control all fires at ten acres or less. The second, applied on the remaining 305,000 acres of the Forest, includes variable acreage control objectives, depending upon the area involved and fire intensity. Other fire management objectives for the entire Forest are to protect air quality through management of wild and prescribed fires and to use prescribed fire to reduce fuel hazards and accomplish other resource management objectives.

The average number of wildfires varies considerably with weather conditions. In the past 20 years the number of man-caused fires has decreased slightly, while lightning fires have increased. The annual burned acreage has not changed significantly over the past two decades. From 1961 to 1970 an average of 109 acres were burned per year, whereas from 1971 to 1980 an average of 112 acres were burned per year.

Some increase in the number of man-caused fires can be expected as development and visitor use increase, although this will not drastically affect the wildfire situation.

The potential for large destructive fires does exist on the San Juan National Forest. Over the next 40 to 100 years, due to aging and decay of forested areas, fuel hazards will likely increase and could result in larger, more destructive fires. This is particularly true in areas of the Forest which receive little fuel treatment.

Integrated Pest Management (IPM) - The Forest's objective is to ensure optimal pest management with respect to environmental concerns, biological effectiveness, and economic efficiency while achieving resource management objectives. The intention is to rely on an IPM policy which will reduce the reliance on chemical methods, and manage resources in a manner that is not conducive to the development and perpetuation of pest problems. Pesticides will be used under prescribed conditions to protect resource values when their use is prudent and control of potential adverse effects can be minimized.

Significant pests on the Forest include insects (mountain pine beetle, spruce bark beetle, western spruce budworm, western tent caterpillar); noxious weeds (Canadian thistle, toadflax, whitetop, knapweed, spurge); and rodents (mice, gophers, porcupines). At present pest management in forest stands is to meet long-range objectives through prevention measures using cultural vegetative practices, particularly planting, harvesting and utilization practices. Biological, chemical, mechanical means, and prescribed fire are considered where conditions are epidemic. Only western tent caterpillar, western spruce budworm, mountain pine beetle, and noxious weeds are considered to be increasing in population at a rate that would be a threat to resources and uses.

Noxious farm weeds are controlled by chemical means, usually in cooperation with county programs. The current level of control is below that required to meet needs identified in noxious weed inventories.

Air Quality - Air quality over the San Juan National Forest is good with respect to all air pollutants. The largest source of air pollution from Forest activities is smoke from both wildfires and prescribed fires, and dust from unpaved roads.

NEED TO ESTABLISH OR CHANGE MANAGEMENT DIRECTION

Included in the analysis of the management situation is a determination of the need to change current management direction on the San Juan National Forest. This was accomplished by assessing the current situation, determining productive potentials, and reviewing public issues and management concerns. The following determinations were made.

Recreation

The Forest seems to have enough developed camping capacity for the foreseeable future, but there is a need for increases in the number of developed trailheads adjacent to major travel routes (excluding State or U.S. Highways) and at destination areas.

Sites informally referred to as "rest stops" (usually classed as observation sites) along State and U.S. Highways are heavily used and apparently highly desired by the public. However, many such sites should be maintained by the Colorado State Department of Highways, not the Forest Service, since use is generated more by the existence of the highway than by the San Juan National Forest environment.

Maintenance and rehabilitation of existing facilities should be given priority over new construction. Consideration should be given to using concessionaires in the operation and maintenance of existing campgrounds. Priority should be given to expanding existing sites. Construction should be limited to areas which lend themselves to concessionaire operation.

Summer and winter backcountry recreation use should be provided through increased trail management including evaluation and a determination of needs and location of hiking, cross-county skiing, snowmobile trails, and dispersed trailhead facilities. Trails should be evaluated and consideration given to closing those with low use.

Visual Resource

Efforts should be made to upgrade the quality of scenic and visual resources. Particular emphasis should be given to areas where visual resource degradation has occurred along major travel routes. Coordination with other management activities should be utilized to enhance the visual resource throughout the Forest.

Wildlife and Fish

The San Juan National Forest will be called upon to provide a greater share of the habitat for major wildlife species. Population goals for major species should be established and increased emphasis should be placed on management to achieve long-range vegetation composition and vegetation diversity objectives.

Fishing demand on the Forest is met largely through artificial stocking programs. Emphasis should be placed on fisheries habitat management to bring key fisheries up to productive potential.

Emphasis should also be placed on nonconsumptive uses of wildlife such as bird watching, photography, and painting.

Range

Demand trends point to the need to increase forage for domestic livestock and wildlife. Range management practices that increase forage production, increase livestock grazing capacities, and protect soil and water resources should be implemented if demand for domestic livestock grazing is to be met.

Timber

A change in the direction of the reforestation program is needed to address regeneration problems and poor plantation success. Additional site productivity studies are needed to determine the best sites for timber regeneration and growth potential. The Forest should emphasize timber production on highly productive sites.

Water

Management emphasis should be directed toward increases in water yield within those watersheds having the greatest water yield increase potential. The Forest should emphasize an increased monitoring program to monitor the effects of activities such as clearcutting or road building on water quality.

Facilities

Refinement of the travel management direction is needed for roads, trails, maintenance, road closures and travel restrictions based upon resource protection and management activities.

Protection

Since fuel loading increases will result from reduced harvesting on some lands, increased use of prescribed burning is needed to accomplish management objectives.

Smoke management should be improved in sensitive areas near communities and heavy use areas. This will require a greater investment in a climatology data base.

Decisions will have to be made on the level of insect; disease and weed pest levels to meet the integrated pest management objective. This will result in several levels of pest acceptance based on biological effectiveness, economic efficiency and environmental concerns associated with a given management area.

THE FUTURE

This section describes how the San Juan National Forest is expected to change under implementation of the Forest Plan. The first part, describes the physical and biological future by planning questions. The second part describes the social and economic future of the proposed action.

The key feature of the Forest Plan is its multiple use mix of outputs. No resource output is emphasized to the extent that standards for other resources are violated. An integrated mix of resource outputs is provided rather than a mix that maximizes some outputs to the exclusion of others.

Consideration of the social resource is given equal importance. By applying socially responsible management principles, the Forest Plan addresses existing public issues and management concerns and allows for identifying and addressing new issues as they emerge, as well as for maintaining or enhancing local community stability.

Implementation of this direction will be coordinated with the policies, programs, and objectives of other Federal agencies and State and local governments. Such coordination will ensure a mutual understanding, if not a compatibility, with other on-going programs.

PHYSICAL AND BIOLOGICAL FUTURE

This section describes expected future physical and biological conditions in relation to each of the planning questions. In response to requirements of 36 CFR 219.11(h), this section also addresses the disposition of public issues and management concerns identified in the scoping process. (Appendix C of the draft Environmental Impact Statement lists specific public issues and management concerns according to the planning questions.)

Planning Question 1 - How should the San Juan National Forest be managed to provide a broad spectrum of dispersed recreation opportunities?

The major issues related to this planning question originate from a perceived conflict between non-motorized dispersed recreation and other uses of the Forest such as livestock grazing and various forms of motorized recreation.

The Forest Plan calls for a large area (approximately 45 percent, including wilderness) of the Forest to be managed for various types of non-motorized recreation use. Additional trails and trailheads will be constructed to accommodate increases in use.

The other half of the Forest area will be available for road-oriented types of dispersed recreation, although a portion of this area will have an environment visibly modified through management activities. Additional roads will be made available for recreation activities as new areas are accessed for other resource management activities. Intensive livestock management, which will occur on approximately one-fourth of the Forest, will continue to result in some user conflicts, although by informing recreationists where intensive livestock use is occurring, the extent of these conflicts can be minimized.

Planning Question 2 - What is the appropriate role of the San Juan National Forest in providing campgrounds, interpretive sites, picnic areas, and rest stops?

A major issue related to this planning question is the extent to which the San Juan National Forest should compete with the private sector in providing developed site recreation opportunities. This issue, coupled with the fact that the San Juan National Forest has a large supply of dispersed recreation opportunities not available in the private sector, leads to a conclusion that National Forest management should be oriented more towards the management of dispersed opportunities. This leaves a portion of the demand for developed experiences to be met by the private sector. The appropriate role is for the San Juan National Forest to continue to offer developed recreation, but not to the extent of competing with the private sector.

The Forest Plan responds to this question by providing for the closure of three potentially competitive sites, increasing the capacity of two heavily used sites, and the consideration of offering six existing sites to the private sector for concessionaire operation. No new developed sites, other than the proposed development connected with the McPhee Reservoir, will be constructed, although further development at the Chimney Rock interpretive site is planned. Rest stops, more properly classified as observation sites, are a type of development best developed by an agency other than the San Juan National Forest, and then only in very select locations.

Specifically, the Forest Plan calls for a reduction in competition through elimination of Thompson Park, Ute, and Piedra Campgrounds. Six additional sites will be considered for operation by concessionaires; these are South Mineral, Old Timers, Graham Creek, North Canyon, Pine Point, and Middle Mountain Campgrounds. Expansion of two sites, South Mineral and Middle Fork Campgrounds, will take place to accommodate heavy use. Reconstruction or rehabilitation will take place on six additional sites, and these plus the remaining ones will continue to be operated and maintained by the San Juan National Forest.

Facilities will be removed from the San Juan and Dolores Canyon Overlooks in order to reduce administration costs.

Planning Question 3 - What resources and uses should be allocated for downhill skiing on the San Juan National Forest?

The major public issues and management concerns associated with this planning question relate to impacts on local communities and major ski area development. Under the Forest Plan, existing winter sports areas at Purgatory and Stoner would continue to operate. The expansion of Purgatory under the presently approved permit would take place, consideration would be given to minor expansion at Stoner and three of the inventoried sites rated "good" or better (East Fork, Windy Pass, and Grayrock-Cascade) would be retained for possible development. Of these three sites, both East Fork and Windy Pass are located in the vicinity of Pagosa Springs. The third site, Grayrock-Cascade is located just north of Purgatory Ski Area, which is within 30 miles of Durango.

The social and economic changes presently taking place in the Pagosa Springs area, as well as the economic diversity of the Durango area, indicate that these towns are capable of absorbing the effects of new ski development without major impacts on the social and economic structure. Impact studies would be needed to confirm this prior to the granting of any new permits. The Forest Plan only manages the sites to protect their ski area potential. It does not ensure they will be developed.

Planning Question 4 - How much classified wilderness should the San Juan National Forest have, and how should it be managed?

The major public issues and management concerns related to wilderness management center around conflicts between both existing and potential users of lands that are or may become designated wilderness areas. The Forest Plan identifies the Piedra (41,500 acres) and West Needle (15,800 acres) Wilderness Study Areas as suitable for wilderness. Management of all wildernesses will be in accordance with the Wilderness Act of 1964 and will occur with a minimum of direct controls on recreation visitors.

The South San Juan Wilderness Expansion Study Area (32,800 acres) is determined not-suitable for wilderness and should be released for non-wilderness management.

Planning Question 5 - What kind of transportation system is necessary to serve future resource management and public needs?

A significant portion of the public issues and management concerns related to transportation center around the apparent conflict between those who desire increases and improvements in access to the Forest and those who feel that there is sufficient or even too much access. The transportation system is critically related to the degree to which most other resources can be utilized or enjoyed; therefore, a well designed system is important to integrated resource management on the Forest.

Even though approximately 770 miles of new road are to be constructed over the next 50 years, the number of system roads maintained will only increase to a level of about 2,300 miles which is 104 percent of present mileage. Roads will be removed from the transportation system in response to long-range road density objectives prescribed for management areas. They will be obliterated (returned to production) when the facility will no longer be used or planned as a travelway or put-to-bed (stabilized) when use is not planned for an extended period of time. Of the total area presently in unroaded or low road conditions, almost three-fourths will remain in that condition over the next 50 years.

Approximately one-third of the 2,300 miles to be maintained will be maintained only to a standard necessary to protect the road investment and the surrounding resources. These roads will not be open to public traffic.

The Forest Plan also calls for a moderate emphasis to be placed on trail reconstruction. This includes trails for livestock and recreation use. Total trail miles would decrease by approximately 22 percent over the planning period.

Planning Question 6 - How should the San Juan National Forest manage its tree resources?

Public issues and management concerns related to this planning question address the growing and harvesting of trees for commercial wood products and the benefits or conflicts with other resource values and uses of forested lands.

There is a feeling of some individuals and interest groups that timber management on the Forest is neither economically efficient nor capable of ensuring a continual flow of high quality timber from the land base. The Forest Plan calls for elimination of timber management activities on those areas not capable of being adequately regenerated within a specified period of time. Specifically, areas of nonstocked ponderosa pine and pine on lands greater than 30 percent slope will no longer be considered as suitable for timber management because of lack of regeneration success.

On those areas that are suitable for timber management, prescribed silvicultural practices will be used to produce high quality pole and sawtimber volume at a level of 40 million board feet per year during the first decade of the planning period. Silvicultural activities will be used to enhance natural regeneration and will be coordinated to satisfy non-timber resource objectives. Timber harvests will be designed to improve diversity for wildlife, enhance aesthetics, and improve snowmelt patterns. Timber-related activities will also comprise an integral part of the pest management program on the Forest.

Conflicts between timber and other resources are addressed by the Forest Plan in that over half of the area determined suitable for timber management has sales designed specifically to benefit range, wildlife, or water resources. Visual resource management considerations will be an important part of sale design and layout. Roads constructed for timber access will be designed considering the needs for activities such as recreation, firewood gathering, and Christmas tree cutting.

On lands unsuitable for timber management, vegetation manipulation will be used to satisfy other purposes and objectives although merchantable timber volume may become available as a result.

Planning Question 7 - What is the role of the San Juan National Forest in providing wildlife habitat?

Most public issues and management concerns related to wildlife have as their theme either the need for more attention to specific wildlife habitat needs or the conflicts between wildlife and domestic livestock grazing.

The Forest Plan calls for a 66 percent increase in winter range carrying capacity for deer and a 24 percent increase for elk by the year 2030. Wildlife habitat diversity would be improved on approximately half of the Forest, and all miles of stream presently classified as suitable for improvement would be improved for fish habitat by the year 2020. Specific timber sales will be designed and laid out which have improvement of wildlife habitat as their major objective. All sales would be designed to improve habitat to some extent.

Conflicts between wildlife and domestic livestock grazing will be reduced through improvement of range conditions across the Forest as well as by improving the distribution of domestic stock.

Planning Question 8 - What is the role of the San Juan National Forest in providing for grazing of domestic livestock?

Most public issues and management concerns related to grazing deal with conflicts between grazing and other activities and the need to determine and intensify livestock management on the Forest. The Forest Plan calls for authorized livestock grazing to remain at present levels during the first decade, with gradual increases of

up to 18 percent by the year 2030. Continuation of present levels for a period of time is needed to allow recovery of land in less than satisfactory condition. Once recovery is made, gradual increases can be allowed, although careful monitoring will be necessary to ensure that overgrazing does not take place.

Intensive livestock management will take place on approximately 59 percent of the San Juan National Forest. Intensive management involves relatively high costs in some areas, yet results in greater yields per acre than other management systems. Areas under intensive management allow other areas to be managed more extensively for other uses such as recreation and wildlife; thus reducing conflicts with livestock grazing.

Planning Question 9 - How should the San Juan National Forest respond to increasing demand for high-quality water?

Public issues and management concerns related to water express the need to provide a continued or increased quantity of high-quality water for present and future needs. The Forest Plan calls for an increase in total water yield from the Forest to a level of approximately one-third of the potential by the year 2030. This will be accomplished through coordination with silvicultural activities mainly at higher elevations. Timber harvests will be designed to increase water yield through improved snowmelt patterns and runoff.

Water meeting water quality goals will also increase slightly as those watersheds presently below water quality standards are allowed to recover through natural successional processes. Wetland and riparian ecosystems will be maintained, or even enhanced in some areas, as a result of protection measures called for in the Forest Plan.

Planning Question 10 - What is the role of the San Juan National Forest in regard to the identification, protection and use of cultural resources?

Public issues and management concerns related to cultural resources (CR) express the need to identify (inventory), protect, and develop sites before opportunities to do so are foregone. The present inventory strategy that relies heavily on data generated from field surveys conducted for resource activities will continue under the Forest Plan. Also, some CR surveys will be completed for "high sensitivity" zones independent of a specific resource use proposal. Approximately 50 percent of the Forest will have been inventoried and probably all major CR properties will be accounted for by 1990 at this level of commitment.

Efforts to protect important CR properties, especially from damage caused by illegal activities, e.g., vandalism and "pot hunting," will be increased under the Forest Plan but still remain at a minimal level. Enforcement of the current "avoidance" policy will remain as our primary protection tool but with monitoring safeguards to ensure better compliance and procedural adequacy.

Suitable CR properties will be developed for public education and recreation under the Forest Plan. Such development, however, will be largely restricted to low cost and maintenance projects such as interpretive signing, literature, and self-guided trails. Relatively high level development will be restricted to the Chimney Rock Archeological Area.

Planning Question 11 - How should the San Juan National Forest respond to mineral resource development?

Most mineral related issues and concerns express the need for controlling adverse surface resource impacts while at the same time being responsive to the Nation's need for minerals. More specifically, where and under what conditions should mineral exploration and development be allowed on the Forest? Oil, gas, and geothermal leasing, exploration, development, and related geophysical investigations within wilderness and Wilderness Study Areas (WSA's) were identified as activities adversely affecting the environment and wilderness character; however, the Wilderness Act of 1964 permits exploration and development until January 1, 1984.

Application of the minerals management direction contained in the Forest-wide Management Requirements of the Forest Plan will prevent or control adverse impacts on surface resources both inside and outside wilderness and WSA's. On the entire San Juan National Forest, including wildernesses and WSA's, the Forest Service would recommend that the Bureau of Land Management issue oil, gas and geothermal leases on 1,566,000 acres. Approximately 1,343,000 acres would be leased with surface occupancy permitting a full range of exploration, development, and production activities; 233,000 acres would be leased with the no surface occupancy stipulation. Oil and gas deposits within the no surface occupancy areas could be recovered through directional drilling or other techniques which will not disturb surface resource values. Leases issued for lands which are part of the National Wilderness Preservation System would include reasonable stipulations as required by Section 4(d)(3) of the Wilderness Act. Leases issued for lands which are recommended for addition to the Wilderness System would include stipulations, as provided by the 1920 Minerals Leasing Act. These stipulations are contained in Appendix H.

To minimize surface disturbance until commercial quantities of oil or gas are found, exploratory drilling in wilderness must be conducted using airlift mobilization. If commercial quantities of oil and gas are discovered, roads and ancillary facilities would be permitted within those areas suitable for surface occupancy.

Planning Question 12 - How should the San Juan National Forest respond to the increasing demand for special uses and land adjustments?

Major public issues and management concerns related to special uses and land adjustments either express a desire for more access to the Forest or identify conflicts between special uses, such as utility corridors and summer homes, and other types of uses. The San Juan National Forest will respond to the increasing demand for special uses and land adjustments by:

1. A priority system on both land adjustments and special use permits to identify those cases having the greatest public benefit.
2. Close coordination with local governments including the initiation of memorandums of understanding.
3. Increased proponent participation in the furnishing of data for complete analysis of proposals and additional information or support as needed (e.g., archaeological reports, surveys) for case completion and to meet proponent's time frames.

Within the next 10 years, the Forest Plan calls for annual purchase of 100 acres of land, acquiring 500 acres of land offered by exchange, acquisition of three rights-of-way, and location of 45 miles of land lines. This will allow completion of the land line location backlog by the year 2020.

SOCIAL AND ECONOMIC FUTURE

The area surrounding the San Juan National Forest, identified as Social Resource Unit K, is characterized by a relatively stable economy in which overall settlement and employment patterns are changing very slowly. Implementation of the Proposed Action will most likely not result in major changes in the general economic picture, although specific sectors may experience a level of growth which can be attributed directly to activities taking place on the Forest.

The total population in the five-county area could increase by approximately eight percent during the first decade of implementation of the Plan. Growth would be most acutely realized in the tourism sector, where employment could increase by as much as 40 percent or more. This assumes that factors other than supply which have caused recent increases in the levels of tourism will continue to operate. Examples of these include the availability of inexpensive means of transportation and increased leisure time. Employment in the agricultural and timber producing sectors is also expected to rise as a result of generally higher levels of timber volume and livestock forage production. This assumes that the depressed housing market will recover.

It is possible to more specifically identify these changes from a geographic standpoint. No significant shifts are expected in relation to the relatively important positions that retail trade and tourism hold in the Animas Human Resource Unit, or away from the agricultural and lumbering emphases in the Montelores Human Resource Unit. In the Montelores Area, there will most likely be an increase in both the recreation and mining sectors as the McPhee Reservoir and CO₂ mining projects come on line, although agriculture and timber-related activities will continue to be important economic activities, at least in the immediate future. The Pagosa Human Resource Unit is currently experiencing a shift away from a predominately agriculture and lumbering economic base to a more diverse economy with significant growth being experienced in the tourism and housing sectors. This trend is expected to continue under the Proposed Action. Human resource management programs carried out by the agency will continue to emphasize employment and training programs for youth, older Americans, minorities, and the disadvantaged to the extent that budget allocations will allow.

Dollar returns to the U.S. Treasury will increase significantly over the 50-year planning period under the assumption that demand for the various revenue-producing goods and services on the Forest will continue to rise. This reflects the strong emphasis on income-producing resources, specifically timber and livestock forage under the Proposed Action. Under this same assumption, payments to counties will increase in direct proportion to returns to the Treasury, and could achieve levels up to two and a half times higher than current payments.

The total average annual cost of implementing the Forest Plan for the next 10 years will increase about 7.5 percent. These costs are mainly operation and maintenance costs, including salaries of personnel. Therefore, employment in the government sector is expected to remain fairly constant unless budget allocations are drastically reduced. Capital investments will be increased only slightly from present levels.

RESEARCH NEEDS

The planning process identifies areas of research needed to support or improve management of the San Juan National Forest. They are summarized below for consideration for research projects and will be updated during periodic evaluation of Plan implementation.

Soil and Water

The majority of existing information relating to soil productivity and its capability comes from agricultural research. More information on forest soils is needed to help answer the following:

- How do management activities affect soil productivity?
- How much erosion is acceptable for the soils on the San Juan National Forest?
- Is compaction a problem on the Forest? If so, what is the best way to prevent or mitigate it?

-Is fertilization feasible or desirable?

-What soil features should we monitor to evaluate changes in soil productivity?

Wildlife and Fish

Research is needed on how best to determine vegetation diversity (composition plus structural), its juxtaposition and interspersion and how these factors actually affect population levels of various management indicator species. Questions that need to be answered include:

-Can diversity be determined effectively for many species using a common area or does each species need to be studied individually?

-What changes in diversity and to what magnitude of change (size and time span) is necessary to markedly affect population size of primary management indicator species?

-What is the total effect of disturbances that change diversity through vegetation manipulation practices? This also relates to overall visual quality and total forage composition and production to be available for wildlife and domestic livestock.

Protection (Includes Prescribed Fire)

The Forest Service will continue the present research study in the ponderosa pine-oakbrush type. This study relates to the on-site vegetation effects of seasonal and interval burning, fuel accumulation, and seedbed preparation within this type. The study should be expanded to determine effects of burning on soil and water resources.

A study is needed of local historic fire regimes so that intervals of natural fire and the resulting vegetation and soil succession trends can be predicted. Stylized fuel models need to be developed to represent local situations and resource fire effects.

Also, a study is needed to improve the risk interpretation for forest pests and weeds on various sites.

Timber

Research needed to answer questions related to timber management are:

-A study of the physical and chemical site properties affecting timber productivity and regeneration (especially in ponderosa pine).

This research should include evaluation of regeneration problems in the ponderosa pine type, and field, lab, and greenhouse studies to evaluate the relationship between site characteristics and regeneration.

-Effects of oak brush competition on the growth of ponderosa pine.

-Stand regeneration studies under local conditions to determine the best silvicultural practices to use to ensure adequate natural regeneration.

-Development of site index/productivity index tables for local species on local site conditions.

Planting stock research to obtain precise data relative to size and shape of containers, root configuration, planting season, number of trees per square foot, age of stock to be planted and lifting data.



III. management direction

CHAPTER III

MANAGEMENT DIRECTION

IMPLEMENTATION

This San Juan National Forest Land and Resource Management Plan provides long-range management direction for the San Juan National Forest.

This direction is used by Forest Service personnel to achieve the results set forth in the Plan. It also serves to inform the public and other agencies about future programs so that understanding and cooperation can be obtained. Direction is expressed in terms of goals, objectives, standards and guidelines, and specific management area prescriptions. The direction responds to public issues, management concerns, and opportunities within the availability, suitability, and capability of the land and resources.

Implementation of this direction is the key to translating the goals, objectives, and standards and guidelines stated in the Forest Plan into on-the-ground results. The Forest Plan is implemented through the Program Development and Budgeting, and Annual Work Planning processes. These processes supplement the Forest Plan by making the annual adjustments and changes needed to reflect current priorities within the overall Plan direction.

The Forest Plan provides guidance for developing multi-year implementation programs for each Ranger District. The Plan's management area direction, objectives, and standards and guidelines are translated into these multi-year program budget proposals which specifically identify the activities and expenditures necessary to achieve the direction provided by the Forest Plan. These implementation programs form the basis for the Forest's annual program budget.

Upon approval of the final budget appropriation for the Forest, the annual program of work is finalized and implemented on the ground. The annual work plan provides the detail to the program budget proposals necessary to guide the land managers and their staffs in responding to the direction of the Forest Plan. The activity files in the data base and the Program Accounting and Management Attainment Reporting System provide information for monitoring the accomplishment of the annual Forest program.

Environmental Assessments and Decision Notices, when needed, will supplement the Forest Plan Environmental Impact Statement (EIS). Environmental analyses will use the Forest Plan direction as an umbrella. Additional detail will be included in the environmental analyses for other factors appropriate for project level decisions. Environmental Assessments and Decision Notices will be supplemental to the Forest Plan EIS. Environmental Assessments will not be written for projects adequately covered in the Forest Plan EIS.

The management direction of this chapter is composed of two major parts: Forest direction and Management Area direction.

Forest direction consists of goals, objectives, and Forest-wide Management Requirements. Broad overall direction on the type and amount of goods and services that the Forest will provide is contained in the goals and objectives. The Forest-wide Management Requirements set the minimum conditions that must be maintained while achieving the goals and objectives.

Management Area Direction consists of management area prescriptions and the management areas shown on the Forest Plan map. The management area prescriptions state what activities will be implemented to carry out the goals and objectives. The management area, when used in conjunction with the management area prescription, indicates where the prescription will be applied. The Forest Plan map indicating management areas is considered a part of this document.

Implementation maps indicate the estimated timing and vicinity or location of proposed and probable management practices for the first 10-year period. An implementation map is a composite of 7½ minute quadrangle map overlays. These overlays supplement the Forest's vegetation data base and are available for review at the applicable Ranger District offices. This map will be updated annually to reflect project completion, changes in scheduling due to funding changes, and adjustments in projects resulting from better site specific knowledge.

Additional direction and information is contained in Appendices A through H. Appendix A specifies the vegetation management practices to be used to attain the resource objectives of the respective management areas. Appendix B contains the ten-year timber action summary for the San Juan National Forest; Appendix C summarizes arterial and collector road construction and reconstruction for the next ten years; Appendix D summarizes trail construction and reconstruction; Appendix E summarizes proposed mineral withdrawals and revocations; Appendix F summarizes lands capable, available and suitable for timber production; Appendix G lists roads and trails open to motorized use within Management Area H, semi-primitive non-motorized emphasis; Appendix H contains standard and special stipulations for minerals leasing.

FOREST DIRECTION

GOALS

The San Juan National Forest management goals describe the state or condition of the resources or situations that the Forest Plan is designed to achieve.

The goals of the Forest Plan are:

Recreation, Cultural and Visual

- Provide nearly equal areas for motorized and non-motorized dispersed recreation opportunities.

- Provide areas for semi-primitive non-motorized recreation opportunities to perpetuate that recreation experience.
- Provide the opportunity for developed recreation sites to be operated by public concessionaires.
- Provide more cost effective service to the public by closing low-use developed recreation sites and expanding heavy-use sites.
- Provide opportunities for expanding downhill skiing in Human Resource Units that can accommodate the social and economic impact.
- Locate, determine significance, and where appropriate, preserve historical and archaeological sites.
- Manage exceptional historical and archaeological sites for increased public use and visitation, while still protecting the values of the site.
- Make historical and archaeological sites available for study by agencies involved in research.
- Enhance and/or preserve scenic values along heavily traveled roads, use areas and trails through management activities.

Wilderness

- Provide the opportunity for additions to the National Wilderness Preservation System.
- Manage wilderness to preserve the wilderness character and provide for compatible human use and enjoyment through indirect control methods.

Wildlife

- Increase winter range carrying capacity for deer and elk.
- Improve wildlife habitat diversity on approximately half of the Forest.
- Improve fish habitat on suitable streams and low elevation ponds and lakes.

Range

- Provide for grazing of livestock at moderately increased levels.
- Provide for intensive livestock management on approximately one-fourth of the Forest.

Timber

- Implement silvicultural practices on areas suitable for timber production to provide roundwood and sawtimber volume above the present level.

- Specifically design half the timber sales on lands suitable for timber management to benefit other resources' objectives.
- Perpetuate the aspen type.
- Eliminate the reforestation backlog by the end of 1985.
- Implement timber stand improvement in ponderosa pine stands through prescribed burning of Gambel oak to reduce competition.
- Determine if ponderosa pine sites now designated as not suitable for timber production can be reforested.

Soils and Water

- Protect soil and water productivity so that neither will be significantly or permanently impaired.
- Protect streams, lakes, riparian areas, and other bodies of water through management activities.
- Improve water quality by allowing those watersheds presently below water quality standards to recover.
- Increase water yield through land treatment measures consistent with other resource objectives and water quality standards.

Minerals

- Manage mineral exploration, development, and extraction with mitigating measures to minimize adverse environmental effects to surface resources.

Lands

- Provide for increased opportunities for exchange of National Forest System lands.
- Pursue acquisition of necessary rights-of-way to facilitate public access to National Forest System lands.

Facilities

- Manage the transportation system for increased cost-effectiveness and efficiency.
- Provide for a slight increase of maintained road mileage but maintain approximately one-third of the mileage only to protect the road investment and surrounding resources, and close to public use.
- Retain three-fourths of the present acreage in unroaded or low-roaded densities.
- Provide for the reduction of total trail miles while emphasizing reconstruction on trail miles remaining.

Human and Community Development

- Provide the opportunity for economic growth of industries and communities dependent upon Forest outputs.
- Provide the opportunity for community stability and cohesion within the Human Resource Units to remain in productive harmony with the activities on the San Juan National Forest.
- Provide the opportunity for human resource programs that assist the disadvantaged with employment opportunities.

OBJECTIVES

Objectives are the annual activity outputs provided to accomplish the goals and to help address the public issues and management concerns represented in the planning questions. These are specified in Table III-1, along with the projected average annual costs and returns associated with the objectives.

The projected budget level given for each time period is the amount required to implement the Forest Plan. The annual budget, as authorized by Congress, may be different from that which is indicated as necessary for carrying out the intent of the Forest Plan. It is for this reason that short-range objectives must be flexible enough to accommodate for variation, while the long-range objectives must be rigid enough to guide the development of the annual budget request to insure implementation of Forest Plan direction.

FOREST-WIDE MANAGEMENT REQUIREMENTS

Forest-wide Management Requirements contain direction which applies to the entire San Juan National Forest where a specific activity occurs. They are presented on the following pages in three sections: Management Activities, General Direction, and Standards and Guidelines.

Management Activities are identified by code and title as specified in the Management Information Handbook (FSM 1309.11). This identification serves to give a common definition to the activities being considered.

The General Direction Section contains narrative statements which specify the actions, measures, or treatments (management practices) to be done when implementing the management activity, or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the general direction is to be implemented.

TABLE III-I

Projected Average Annual Outputs, Expenditures, Costs, and Returns

Activity	Units	Time Periods						
		1980	1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
RECREATION								
Developed	Thousand Visitor Days <u>1/</u>	583 <u>2/</u>	685	820	1070	1290	1480	1560
Downhill Skiing	Thousand Visitor Days	138	165	350	550	710	940	1090
Dispersed (includes off-road motorized)	Thousand Visitor Days	878	1250	1520	1855	2185	2415	2540
Off-Road Motorized	Thousand Visitor Days	63	80	100	120	140	155	165
Trail Construction/Reconstruction	Miles	12	39	51	45	45	45	45
WILDERNESS								
Wilderness Management	Thousand Acres	361	418	418	418	418	418	418
Wilderness Use	Thousand Visitor Days	139	170	193	236	264	297	328
WILDLIFE & FISH								
Elk Winter Range Carrying Capacity	Thousand Animals	12.8	13.7	13.7	14.1	14.8	15.2	15.9
Deer Winter Range Carrying Capacity	Thousand Animals	16.4	19.4	19.4	21.7	23.8	25.1	27.2
Structures	Number	29	76	76	78	80	83	71
Big Game Hunting <u>3/</u>	Thousand Visitor Days	92	142	142	173	204	226	237
Small Game Hunting <u>3/</u>	Thousand Visitor Days	16	16	25	30	35	39	41
Fishing <u>3/</u>	Thousand Visitor Days	137	209	209	255	301	334	351
Non-game Use <u>3/</u>	Thousand Visitor Days	10	15	15	18	21	23	24
RANGE								
Grazing Use	Thousand Animal Unit Months <u>4/</u>	170.2	169.5	169.5	190.8	194.1	197.6	200.2

TABLE III-I (Continued)

Projected Average Annual Outputs, Expenditures, Costs, and Returns

Activity	Units	Time Periods						
		1980	1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
<u>TIMBER</u>								
Sale Offerings 5/	Million Cubic Feet	8.5	10.0	10.0	10.5	11.0	11.5	15.3
	Million Board Feet	33.8	40.0	40.0	42.0	44.0	46.0	61.2
Reforestation 6/	Thousand Acres	3.4	4.0	2.3	1.2	2.8	0.1	6.1
Timber Stand Improvement	Thousand Acres	3.3	9.4	9.4	8.9	8.7	8.7	6.4
<u>WATER</u>								
Water Yield	Million Acre Feet	2.50	2.503	2.503	2.511	2.520	2.520	2.519
Water Meeting Water Quality Goals	Million Acre Feet	1.85	1.85	1.85	1.85	1.89	1.89	1.89
<u>MINERALS</u>								
	Operating Plans	153	296	392	454	520	606	612
<u>HUMAN & COMMUNITY</u>								
Human Resources	Enrollee Years	31	25	N/A	N/A	N/A	N/A	N/A
<u>LANDS</u>								
Purchase and Acquisition	Acres	0	100	100	100	100	100	100
Exchange	Acres	0	500	500	500	500	250	250
Right-of-Way Acquisition	Cases	4	3	3	3	3	3	2
Land line Location	Miles	29	45	45	45	45	45	45
<u>SOILS</u>								
Resource Improvement	Acres	60	158	158	66	36	19	21
Soil Surveys	Thousand Acres	90.5	85	85	57	10	10	10
<u>FACILITIES</u>								
Arterial and Collector Road Construction and Reconstruction	Miles	5.0	14.6	14.6	20.1	10.9	4.5	4.6
<u>PROTECTION</u>								
Fuel Treatment	Thousand Acres	4.2	7.2	7.2	7.2	7.2	7.2	7.2

TABLE III-I (Continued)

Projected Average Annual Outputs, Expenditures, Costs, and Returns

Activity	Units	Time Periods						
		1980	1981-1985	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
EXPENDITURES 7/ Operation and Maintenance	Thousand Dollars	4851	4661	5333	5693	5202	4396	4473
Capital Investments	Thousand Dollars	1584	2129	1632	1812	1526	1145	1127
Backlog 8/	Thousand Dollars	(945)	(1034)	(302)	(302)	(214)	(214)	(214)
Allocated Funds	Thousand Dollars	54	160	94	94	94	94	94
Total Budget	Thousand Dollars	6489	6950	7059	7599	6822	5635	5694
RETURNS 7/ Return to Treasury	Thousand Dollars	747	2356	2356	2606	2749	3153	3281

- 1/ Recreation Visitor Day = 12 hours of recreation for one person or one hour of recreation for 12 persons or any combination thereof.
- 2/ For comparison purposes, a hypothetical 109 thousand visitor days have been added to the 1980 developed recreation outputs to represent use at the McPhee recreation sites. These sites are planned and will be available for public use by 1985.
- 3/ Wildlife and fishing use figures are also included in dispersed recreation; they are not additive.
- 4/ Animal Unit Month = the amount of forage consumed by one mature cow or its equivalent in a one-month period.
- 5/ The same sale offerings are expressed in cubic feet and board feet; they are not additive.
- 6/ Reforestation figures include site preparation for natural regeneration.
- 7/ All expenditures and returns are in constant 1978 dollars.
- 8/ Backlog expenditures include land line location and reforestation which are also included in operation and maintenance and capital investment figures respectively; figures in parentheses are therefore not additive.

RECREATION

Recreation Planning and Inventory (A01; 303)

Manage the Continental Divide National Scenic Trail (CDNST) in accordance with existing law and the CDNST Comprehensive Plan. The corridor near the boundary between the San Juan and Rio Grande National Forests has been identified and is mapped as segments number 43 through 47 in the appendices to the CDNST Comprehensive Plan. The CDNST corridor is that area which encompasses the foreground and middleground of the seen area as reviewed from the travel routes within the identified segments.

Interim Management within this corridor will consist of establishing and maintaining visual quality objectives for foreground and middleground areas.

1. All travel route alternatives within the CDNST corridor have a visual management system Sensitivity Level I classification. Foreground and middleground areas within the corridor will meet the highest visual quality objective available within the existing visual condition class constraints and the visual quality of the management area.

2. Existing travel routes shall not be marked as being part of the CDNST system.

Upon formal designation of a travel route segment as a part of the CDNST system, the CDNST will be managed to emphasize foot travel, provide for horse use where safe to do so and the continuation of motorized use where presently permitted and considered appropriate in the management direction for the overall management area. Consideration will be given to the needs of the long distance traveler. Trail location will avoid urban areas or large developed recreation sites. Trail location may be routed through or adjacent to all other resource management activity areas where such location will not create an unacceptable safety hazard to users. Trail location and management will be sensitive to natural features, wildlife, and wildlife habitat needs, and areas of concentrated use.

1. The formally designated CDNST travelway will have a Sensitivity Level I classification. Foreground and middleground areas, as seen from the trail, will meet the highest visual quality objective available within the existing visual condition class constraints, and the visual quality of the management area.
2. Mark travel routes using the CDNST logo according to appropriate standards in the Comprehensive Plan.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

3. Where motorized use is permitted, limit such use to vehicles with less than 40 inch width except where the route co-exists with a primitive road open to use by larger vehicles, and snowmobiles operating on snow.

Cultural Resource Management (A02)

Manage cultural resource properties in accordance with applicable laws, regulations, and public interest. Emphasize the protection of significant cultural resource properties, completion of the Forest inventory, and assessing the significance of inventoried properties. Identify opportunities for use of cultural resource properties.

Cultural Resource Inventories (306)

Complete the Forest's inventory of cultural resource properties through the compilation and tabulation of field survey data generated by evaluations completed in connection with the field activities of other resource programs as well as "get ahead" type inventories conducted, independent of a specific use proposal, by the Forest's cultural resource management program. Emphasize inventories in "high resource sensitivity" zones.

Cultural Resource Evaluation (307)

Determine the significance of inventoried cultural resource properties primarily in relation to the National Register of Historic Places using assessment criteria established by the Forest Service and in 36 CFR 60. This will be a continuing process prioritized with respect to the needs of other Forest resource programs, as well as the needs of the cultural resource management program. Nominate qualifying cultural resource properties to the National Register of Historic Places and/or other appropriate designations and honors. Properties evaluated as being "insignificant" will not be managed under the San Juan National Forest's cultural resource program.

Cultural Resource Protection (308)

Evaluate all proposed field activities/projects/plans that involve San Juan National Forest lands for effects on significant cultural resource properties.

Design and implement appropriate administrative and field procedures to protect significant cultural resource properties from being damaged or destroyed.

1. Design conflicting field activities/projects to avoid, directly or indirectly, adversely affecting significant cultural resource properties. This will be the preferred protection policy of the San Juan National Forest and will be implemented to the degree feasible.

MANAGEMENT ACTIVITIES

Cultural Resource
Protection (308)
Continued

GENERAL DIRECTION

2. Ensure all land use permits, contracts, and any other types of land use/occupancy authorities issued or agreed to by the Forest Service contain adequate stipulations and clauses for the protection or mitigation of identified, and possibly unknown, significant cultural resource properties.
3. Check the filed condition of significant cultural resource properties at least annually and document the results. Give priority to National Register properties and properties vulnerable to destruction by illegal activities (vandalism, "pothunting," etc.).
4. Implement measures to correct problems of deterioration or destruction to cultural resource properties. Corrective measures include, but are not limited to, posting, fencing, ruins stabilization, data recovery, closure orders, withdrawals, close surveillance by law enforcement officers, etc.
5. Inform visitors of cultural resource protection requirements.

Relocate the affected resource and/or salvage data from the resource when damage or destruction of a significant cultural resource property is unavoidable.

Nominate qualifying cultural resource properties for listing in the National Register of Historic Places, National Historic Landmark designation, and/or other protective status designations and listings.

Cultural Resource
Enhancement (309)

Encourage use of cultural resource properties for research and academic purposes by providing data to the State Historic Preservation Office, publishing and disseminating information on a limited basis, protecting and developing such properties for research purposes, and issuance of Antiquities and Special Use Permits under the provisions of the Act of June 4, 1897, the 1906 Federal Antiquities Act, and the Archaeological Resources Protection Act of 1979 (Public Law 96-95). Designate qualified and suitable properties as Archaeology Research Natural Areas.

Encourage use of suitable cultural resource properties for ceremonial/religious or other socio-cultural purposes by Native Americans and other cultural/ethnic groups.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Interpret and develop significant and suitable cultural resource properties for the recreational use of the general public. Give priority to those kinds of developments that are evaluated as being in the interest of protecting a specific property or cultural resource properties in general.

1. Emphasize low cost and maintenance type developments; i.e., interpretive signing, interpretive hand-out literature, self-guided trails.
2. Consider high cost and maintenance type developments only for properties of exceptional importance and of high public interest; i.e., those requiring personal visitor services, routine patrol and supervision by Forest Service personnel, construction of campgrounds, toilets, and visitor centers, major stabilization or reconstruction of ruins.

Encourage adaptive or compatible modern uses of suitable cultural resource properties such as use of historic buildings as Forest Service administrative facilities.

Visual Resource Management (A03, A04)

Maintain an appropriate level of visual integrity by ensuring the visual resource is treated as an essential part of, and receives equal consideration with, other resources of the land.

1. Manage visual resources to prevent unacceptable alteration of natural landscapes and to create and maintain visual diversity in the landscape.
2. Maintain visual quality by providing landscape settings which complement programmed management activities.
3. The minimum required visual quality objective of any given activity is "Maximum Modification." Insure that areas in an "Unacceptable Modification" state are upgraded to the adopted visual quality objective of at least "Maximum Modification." Assign the short-term goal of "Rehabilitation" to these areas during and subsequent to such resource management activity.

Recreation Management (Private and Other Public Sector) (A16)

Review permits for summer homes and other recreation uses currently. Establish termination dates on special uses with recognized conflicts with high public uses.

WILDLIFE

Threatened and Endangered Plant and Animal Management (C02; 605, C06, C08, C011, C12; 646, 647)

Protect threatened and endangered species and maintain or improve their habitat.

1. Identify and maintain essential habitat. This can be done through management restrictions and area closures.
2. Protect threatened and endangered species from harassment. This can be done through management restrictions, closures, observations, and enforcement.
3. Cooperate with the Colorado Division of Wildlife (DOW) in enhancing essential habitat and reintroduction programs so that species can be removed from both State and Federal threatened and endangered lists.
4. Allow collection of threatened and endangered plants only after requirements of the U.S. Forest Service Herbarium are met.

RANGE

Range Resource Management (D02)

Adjust grazing to meet ground cover and percent of forage reserved as listed under SOILS, Standard and Guideline #6.

Range Forage Improvement (D03; 210)

Achieve satisfactory range conditions. Manage for an upward trend on unsatisfactory condition rangeland.

Cooperate with counties and other government agencies in noxious weed control efforts.

Rehabilitate rangeland in low ecological condition to fair or better range condition.

TIMBER

Silvicultural Examination and Prescription (E03)

1. Limit clearcuts to ten acres or less in the spruce-fir type, and 40 acres in other commercial forest types.

2. Make shelterwood removal cut only after stands have a minimum stocking of 300+ trees/acre.

Reforestation (E04)

Regenerate all clearcuts, shelterwood, and selection harvest cuts naturally or artificially within five years after final harvest.

Consider an area regenerated when it has 300+ trees/acre with a minimum stem height of three inches.

GENERAL DIRECTION

To promote successful regeneration in plantations, follow these practices:

1. Select productive sites.
2. Properly prepare sites.
3. Use quality seedlings.
4. Use proper stocking rates.
5. Use proper planting procedures, including timing to assure adequate moisture content of soil and shading.
6. Protect plantations from livestock damage.

Timber Harvest
Administration (E07)

Coordinate slash disposal and fuel treatment to satisfy regeneration and fire management along with soil and watershed protection objectives. Allow firewood gathering in cutover areas and in other designated areas whenever possible.

Use KV and timber funds to manage vegetation for non-timber resources.

STANDARDS AND GUIDELINES

1. Allow conventional logging equipment (crawler tractors and wheeled skidders) on slopes up to 40 percent except where it is predicted that soil cannot support this activity without serious erosion. Possible exceptions are:
 - a. Where there is no site specific soil information, limit conventional logging equipment to slopes of less than 20 percent in shale capability areas and to slopes less than 25 percent in hard sediment capability areas that have less than 20 percent coarse fragments (gravel, cobble, stone).
 - b. For the named and correlated soils within the Piedra soil survey area, the following will apply:
 - Limit conventional logging equipment to slopes less than 30 percent on the following soil types:

Adel loams, Grenadier loams, Muggins loams, Nunn loams and Pescar loams.
 - Limit conventional logging equipment to slopes less than 25 percent on the following soil types:

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Carracas loams, Conisandy loams, Corta silt loams, Duntun loams, Greenough loams, Heflin loams, Hunchback clayloams, Judy silt loams, Limber loams, Mayoworth silt loams and loams, Miracle loamy fine sands, Molas loams, Vasquez loams, Winifred clays and Woodrock silt loams.

The above restrictions may be modified on the basis of more site specific soils information.

- 2. Do not allow high floatation tractors (low PSI) on slopes greater than 60 percent. Cable and aerial logging systems may be used on any slope.

Technical Assistance to Loggers and Processors (E14) Cooperate with and encourage industry to invest in specialized logging equipment.

Forest Engineering Research (E32) Cooperate with research to develop methods to utilize and market substandard and small diameter material.

WATER

Water Resource Monitoring (F03) Meet all applicable State of Colorado Water Quality Standards.

Do not allow increased water yield within any fourth-order watershed to cause excessive scouring and associated sediment increase in sensitive stream channels.

Limit sediment yield increases to "threshold limits" identified for each fourth-order watershed on the San Juan National Forest with the Hyshed Model. Sediment derived from channel scour due to increased water yield has been related to channel stability and the perennial stream riparian capability areas (See Planning Criteria, Planning Action Two for definitions). The total percent of each fourth-order watershed that could be in a clearcut condition, in the absence of roads, is shown below in terms of the perennial stream riparian capability area type at the mouth of the major stream or streams in the watershed:

Riparian Capability Area Types	Percent Clearcut
H3N, I2N, I3N, E2M, E2N, E3N	50
M2N, H1M, H1N, H2M, H2N, I1N	40
M1M, M1M, M1N, S1N, S3N, E1M	27
S1M, S2N	24

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

The total amount of area which can actually be clearcut in each fourth-order watershed is further reduced from the above figures by the amount of existing and proposed roads. The road sediment factor reduces the amount of area that can be clearcut to about 35 percent, 25 percent, 20 percent, and 15 percent for the above riparian capability area type groupings respectively.

The above restrictions may be modified on the basis of more detailed analyses of specific watersheds.

MINERALS

Mining Law Compliance and Administration (G01)

Process mineral exploration and development proposals under the General Mining Laws involving National Forest System lands which have not been withdrawn from entry under these laws. Process operating plan proposals within prescribed time-frames.

All operating plans will include terms and conditions to prevent or control adverse impacts on surface resources in accordance with 36 CFR 228.

1. Unclassified lands: Operating plans will provide for reclamation of disturbed lands to achieve the planned uses specified in the Forest Plan when those lands are no longer needed for operations.
2. Designated wilderness, wilderness study areas, and areas recommended for wilderness designation by RARE II on which Congressional action has not been completed: Operating plans will provide for reasonable access of the type necessary for the purpose of proposed operations and for restoration of disturbed lands as near as practical to their natural condition when they are no longer needed for operations.
3. Other classified lands not withdrawn from operations under the General Mining Laws: Such lands may include Natural Areas, National Recreation Areas, "RARE II" further planning areas, special areas such as scenic and geologic, National Historic Sites, or some other type of specific classification. The status of classified lands with respect to withdrawal must be checked

before an operating plan can be approved. Operating plans will provide for reasonable protection of the purposes for which the lands were classified and for reclamation of disturbed lands to a condition suitable for the purposes for which the lands were classified.

Withdrawals must be for the purpose of protecting specific existing or proposed uses. Initiate actions for withdrawal from entry under the General Mining Laws when 36 CFR 228 and other applicable laws and regulations will not provide the opportunity for protection of surface resources and uses.

Review cases of suspected abuse of the mining laws such as occupancy of the land for purposes other than prospecting, mining and related operations. Initiate appropriate actions to resolve. First action should be administrative. Failure of such action requires examination of claims for validity, followed by appropriate contest proceedings or legal action.

Minerals Management-
Leasables (See the
following for
specifics.)

Withdrawals of lands from operation of the mineral leasing acts will be requested only in exceptional situations because Federal decisions on mineral disposals under these acts are discretionary on a case-by-case basis.

Withdrawals from disposal of common variety mineral materials are unnecessary. The Forest Service has total discretionary authority for such disposals.

Recommendations for or consent to issuance of leases or permits may include lands up to one-half mile within a "no lease" area, subject to no surface use or occupancy on the "no lease" lands. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to "no lease" lands. "No lease" criteria appear under many land type headings below.

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)

Unclassified Lands:

1. Forest Service authorization of geophysical prospecting will include terms and conditions controlling operating methods and times to prevent or control adverse impacts on surface resources and uses.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

GENERAL DIRECTION

2. Recommendations for and consent to BLM issuance of leases and permits will include all current standard stipulations and the Regionally approved special stipulations that may be necessary for additional protection of specific surface resources and uses. Reclamation requirements will have the objective of returning disturbed lands to the planned uses. These standard and current Regionally approved special stipulations are in Appendix H to this Forest Plan.

- a. Standard stipulations, in addition to those in the basic lease or permit document, are BLM Form 3109-3, "Stipulation for Lands Under Jurisdiction of the Department of Agriculture" and Forest Service (R-2) Supplement D to BLM Form 3109-3, "Surface Disturbance Stipulation."

- b. Special Region 2 Forest Service stipulations will be used as appropriate to the surface resource situation on the lands involved in a lease or permit. These stipulations are titled as supplements to Form 3109-3 and are listed below:

- Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulation." This stipulation notifies a lessee or permittee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.

- Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation." This stipulation notifies the lessee that surface values exist that are sensitive to high levels of activity. In such circumstances, the Forest Service may require that activities on the leased land, when multiple leaseholds are involved, be conducted by a single operator, similar to the conduct of operations under a unitization agreement approved by the Geological Survey. An alternative approach would be joint Forest Service/Geological Survey approval of a coordinated plan of operations involving multiple operators.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

GENERAL DIRECTION

-Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies a prospective lessee or permittee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

3. Recommend against or deny consent to BLM for leasing where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation ("no lease" lands). Negative recommendations or consent denials will be based on consideration of the following criteria:

- a. Slopes steeper than 60 percent.
- b. High erosion hazard.
- c. High geologic hazard.
- d. Threatened and endangered wildlife habitat classed as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.
- e. Threatened and endangered plant species.
- f. Low visual absorption capacity.

Designated Wilderness, Congressionally designated Wilderness Study Areas, and areas recommended for wilderness in RARE II on which Congress has not taken final action:

1. Geophysical prospecting, when authorized, will be subject to terms and conditions insuring that operations will be done by methods and at such times that there will be no significant adverse impacts on surface resources.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- a. Geophysical prospecting will be authorized on leased lands and on lands for which the Forest Service will recommend or consent to the issuance of leases and permits ("leasable" lands).
- b. Geophysical prospecting may be authorized:
 - For "no lease" lands (see "3" following) adjacent to leased or leasable lands when the operator can show that geophysical information is necessary for exploratory drilling, or for field development on the leased/leasable lands in the event of a discovery of producible oil, gas or geothermal resources on leased lands.
 - For "no lease" lands when the prospecting proponent can show that the geophysical information is necessary for extending subsurface interpretation from leased/leasable lands across "no lease" lands to other leased/leasable lands. The proponent must also demonstrate that the information can be gained in no other way without significant adverse impacts on surface resources.

2. Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend or consent to BLM for issuance of leases where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions. In addition to all current standard stipulations, the special Regional stipulation described below will be applied; this stipulation is part of Appendix H to this Forest Plan:

Forest Service (R-2) Supplement R to Form 3109-3, "Wilderness Stipulation." This stipulation gives notice of the special nature of the lands involved; specifies the sequence of geophysical investigations and exploratory drilling, with air mobilization for the latter; and describes the conditions that must be met for surface access should a commercial discovery be made. The stipulation also provides for its automatic rescission and replacement should the Congress return the lands to non-wilderness management.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

3. Recommend against or deny consent to issuance of leases where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to operations, would be irreversible and irretrievable, with no potential for restoration as near as practical to natural conditions. The following criteria will be followed in considering recommendations against or denial of consent to leasing:

- a. Slopes steeper than 40 percent.
- b. High erosion hazard rating.
- c. High geologic hazard rating.
- d. Habitat for threatened and endangered wildlife classified as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.
- e. Threatened and endangered plant species.
- f. Low visual absorption capacity.

Classified lands other than wilderness and related, as described in the foregoing, which are not by law or otherwise withdrawn from operations under the mineral leasing acts. Examples of such lands include Wild and Scenic Rivers System, RARE II further planning areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas--such as geological, scenic and zoological, and some other specific classifications.

- 1. Forest Service will authorize geophysical and similar prospecting only when terms and conditions can be applied that will protect the purposes for which the lands were classified.
- 2. Recommendations for and consent to BLM for issuance of leases and permits will include all current standard stipulations and the current Regionally-approved special stipulations necessary to protect the purposes for which the lands were classified. Standard and special stipulations are in Appendix H to this Forest Plan.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

GENERAL DIRECTION

See Unclassified Lands, 2.b, under this Management Activity heading, foregoing, for the standard stipulations. Special stipulations to be applied as appropriate are:

- a. Forest Service (R-2) Supplement A to Form 3109-3, "Further Planning Area Stipulation." This stipulation applies to lands identified for further planning in the RARE II decision documents. It specifies the nature and extent of operations allowed and the conditions to be met for their approval.
- b. Forest Service (R-2) Supplement B to Form 3109-3, "Classified Area Stipulation." This stipulation applies to lands classified under 36 CFR 294 for specific management purposes. Because of the regulatory provisions, no use or occupancy inconsistent with the classification is permitted. This does not necessarily mean recommendation against or denial of consent to BLM for issuance of leases. The reason is that classified areas may be only small portions of large leaseholds.
- c. Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulations." This stipulation notifies a lessee or permittee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.
- d. Forest Service (R-2) Supplement E to Form 3109-3, "Wild and Scenic Rivers System Stipulations." This stipulation establishes operating conditions for lands under study by the Congress for inclusion in the National Wild and Scenic Rivers System. It also provides for establishing appropriate operational controls should the lands be included in that System or should the lands not be added to the System.
- e. Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies a prospective lessee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be

MANAGEMENT ACTIVITIES

Leasable Minerals
Management Oil, Gas,
Geothermal (G02, G04)
(Continued)

GENERAL DIRECTION

devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

- f. Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation." This stipulation notifies the lessee that surface values exist that are sensitive to high levels of activity. In such circumstances, the Forest Service may require that activities on the leased lands, when multiple leaseholds are involved, be conducted by a single operator, similar to the conduct of operations under a unitization agreement approved by the Geological Survey. An alternative approach would be joint Forest Service/Geological Survey approval of a plan of operations involving multiple operators.

3. Recommend against or deny consent to BLM for issuance of leases where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation. Negative recommendations or consent denials will be based on consideration of the following criteria:

- a. Would operations destroy or irretrievably damage the characteristics or purposes for which the lands were classified?
- b. Slopes steeper than 40 percent.
- c. High erosion hazard rating.
- d. High geologic hazard rating.
- e. Habitat for threatened and endangered wildlife classified as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.
- f. Threatened and endangered plant species.
- g. Low visual absorption capacity.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management-Uranium*,
Coal, Non-Energy
Common Mineral
Materials (G03, G05,
G06, G07)

* See G01 for locatable
Uranium.

GENERAL DIRECTION

Unclassified Lands:

1. Forest Service authorize common variety exploration and disposals under terms and conditions to prevent or control adverse impacts on surface resources and uses. The objective of reclamation requirements will be to return disturbed lands to the planned uses.

2. Recommendations for and consent to BLM for issuance of leases, permits and coal exploration licenses will include all current standard stipulations and the Regionally approved special stipulations that may be necessary for additional protection of specific surface resources. The objective of reclamation requirements will be to return disturbed lands to the planned uses. The standard and current Regionally approved special stipulations are in Appendix H to this Forest Plan.

a. Standard Stipulations, in addition to those in the basic lease, permit or license document, are BLM Form 3109-3, "Stipulation for Lands Under Jurisdiction of the Department of Agriculture," and Forest Service (R-2) stipulation, Supplement D to BLM Form 3109-3, "Surface Disturbance Stipulation."

b. Special Forest Service (R-2) Stipulations will be used as appropriate to the surface resource situation involved in a lease, permit or license. These stipulations are titled as supplements to BLM Form 3109-3 and are listed below:

- Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulations." This stipulation notifies a lessee, permittee or licensee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.

- Forest Service (R-2) Supplement H to form 3109-3, "Conditional No Surface Disturbance Stipulation." The usual application of this stipulation for minable minerals will be in exploration permits and licenses. The stipulation notifies a prospective lessee, permittee or licensee that certain described

GENERAL DIRECTION

conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

3. Recommend against or deny consent to BLM for issuance of leases, permits or coal exploration licenses where operational damages on surface resources, including the impacts of surface based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation. Negative recommendations or consent denials will be based on consideration of the following criteria:

- a. Threatened and endangered wildlife habitat classed as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.
- b. Threatened and endangered plant species.
- c. Terrain as it affects waste dumps and tailings disposal, related to both dump and tailings stability and adequate room for placement.
- d. Whether or not negative impacts on water quality are preventable.
- e. For surface-based access, product transportation and ancillary facilities necessary to production and related operations: Slopes steeper than 60 percent; high erosion hazard; high geologic hazard.

Designated Wilderness, Congressionally designated Wilderness Study Areas, and areas recommended for wilderness in RARE II on which Congress has not taken final action.

1. Prospecting for and disposal of common varieties of mineral materials will not be authorized.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management-Uranium*,
Coal, Non-Energy
Common Mineral
Materials (G03, G05,
G06, G07)
(Continued)

* See G01 for locatable
Uranium.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management-Uranium*,
Coal, Non-Energy
Common Mineral
Materials (G03, G05,
G06, G07)
(Continued)

* See-G01 for locatable
Uranium.

GENERAL DIRECTION

2. Coal mining in the National Wilderness Preservation System is prohibited by the Coal Leasing Amendments Act of 1975. Therefore, coal leasing and coal exploration licenses will not be authorized for any of the foregoing described lands.
3. Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend, or consent to BLM for issuance of leases or permits where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions. In addition to all current standard stipulations, the special stipulation described below will be applied; this stipulation is part of Appendix H to this Forest Plan.

Forest Service (R-2) Supplement S to Form 3109-3, "Wilderness Stipulation." This stipulation provides for rigorous controls over access and all operating conditions and related facilities and operations; gives notice of the special nature of the lands involved; specifies the sequence of exploratory and other operations, with air mobilization for the former; and describes the conditions that must be met for surface access should commercial discovery be made. The stipulation also provides for its automatic rescission and replacement should the Congress return the lands to non-wilderness management.

4. Recommend against or deny consent to BLM for issuance of leases or permits where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to operations, would be irreversible and irretrievable, with no potential for restoration as near as practical to natural conditions. The following criteria will be followed in considering recommendations against or denial of consent to issuance of leases or permits:

- a. Threatened and endangered wildlife habitat classed as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

Leasable Minerals
Management-Uranium*,
Coal, Non-Energy
Common Mineral
Materials (G03, G05,
G06, G07)
(Continued)

GENERAL DIRECTION

- b. Threatened and endangered plant species.
- c. Terrain as it affects waste dumps and tailings stability, adequate room for placement and whether or not waste and tailings can be handled or treated in a manner that would allow restoration as near as practical to natural conditions.
- d. Whether or not negative impacts on water quality are preventable.
- e. For surface-based access, product transportation and ancillary facilities necessary to operations: Slopes steeper than 40 percent; high erosion hazard; high geologic hazard; low visual absorption capacity.

* See G01 for locatable Uranium.

Classified lands other than wilderness and related, as described in the foregoing, which are not by law or otherwise withdrawn from operations under the mineral leasing acts. Examples of such lands include Wild and Scenic Rivers System, RARE II further planning areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas--such as geological, scenic and zoological, and some other specific classifications.

1. Forest Service will authorize common variety exploration and disposals under terms and conditions to protect the purposes for which the lands were classified. The objective of reclamation requirements will be to return disturbed lands to a condition suitable for the purposes for which they were classified.

For Special Areas classified under 36 CFR 294 for specific management purposes, the regulatory provisions permit no use or occupancy inconsistent with the classification.

2. Coal mining is prohibited by the Coal Leasing Amendment Act of 1975, within the National System of Trails and the Wild and Scenic Rivers System, including study rivers designated by that Act. This prohibition also applies to the National Park System and the National Wildlife Refuge System, which lands are not under Forest Service jurisdiction.

3. Recommend or consent to BLM for issuance of leases, permits or licenses only when terms and conditions can be applied that will protect the purposes for which the lands were classified.

MANAGEMENT ACTIVITIES

Leasable Minerals
Management-Uranium*,
Coal, Non-Energy
Common Mineral
Materials (G03, G05,
G06, G07)
(Continued)

* See G01 for locatable
Uranium.

GENERAL DIRECTION

4. Recommendations and consent to BLM for issuance of leases, permits or licenses will include all current standard stipulations and the current Regionally approved special stipulations necessary to protect the purposes for which the lands were classified. Standard and special stipulations are in Appendix H to this Forest Plan. See Unclassified Lands, 2.b, under this Management Activity Heading for the standard stipulations. Special stipulations to be applied as appropriate are:

- a. Forest Service (R-2) Supplement A to Form 3109-3, "Further Planning Area Stipulation." This stipulation applies to lands identified for further planning in the RARE II decision documents. It specifies the nature and extent of operations allowed and the conditions to be met for their approval.
- b. Forest Service (R-2) Supplement B to Form 3109-3, "Classified Area Stipulation." This stipulation applies to lands classified under 36 CFR 294 for specific management purposes. Because of the regulatory provisions, no use or occupancy inconsistent with the classification is permitted. This does not necessarily mean recommendation against or denial of consent to issuance of leases, permits or licenses is necessary. The reason is that classified areas may be only small portions of the lands involved.
- c. Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulation." This stipulation notifies a lessee, permittee or licensee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.
- e. Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies the prospective lessee, permittee or licensee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

STANDARDS AND GUIDELINES

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

5. Recommend against or deny consent to issuance of leases, permits or licenses where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation. Negative recommendations or consent denials will be based on consideration of the following criteria:

* See G01 for locatable Uranium.

- a. Would operations destroy or irretrievably damage the characteristics or purposes for which the lands were classified?
- b. Habitat for threatened and endangered wildlife classified as: Possible grizzly bear essential habitat; essential habitat for Federally and/or State classified T&E species; critical habitat necessary for recovery of Federally and/or State classified T&E species.
- c. Threatened and endangered plant species.
- d. Terrain as it affects waste dumps and tailings disposal--related to dump and tailings stability, adequate room for placement, and whether or not waste and tailings can be handled or treated in a manner that results in no detrimental effects on the purposes for which the lands were classified.
- e. Whether or not negative impacts on water quality are preventable.
- f. For surface-based access, product transportation and ancillary facilities necessary to operations: Slopes steeper than 40 percent; high erosion hazard; high geologic hazard; low visual absorption capacity.

LANDS

Special Use Management (Non-recreation) (J01)
Allow permitted uses of National Forest lands that have a demonstrated public need or are compatible with or contribute to San Juan National Forest objectives and are compatible with the resource emphases of the management direction under which the land is managed.

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

1. Review permits currently and establish termination dates on special uses with recognized conflicts with higher public uses.
2. Occupancy and use fees will be commensurate with charges for similar uses on private lands based on an appraisal of the market.
3. The need for use of National Forest lands should be clearly justified. Require a Statement of Need explaining why the project cannot be located on lands of other ownership. New applications will receive low management priority in this plan.
4. Approve new utility corridors only after an analysis of public need and an assessment of alternatives is made. Corridors will meet visual quality objectives wherever possible. Existing utility corridors will be used to the extent possible.
5. Consolidate new electronic facilities with existing sites where possible. Mountains now without facilities will remain undeveloped unless classified as approved electronic sites.
6. Issue special use permits when the use serves the public interest or when denial would take away a legal right. Decide exceptions on a case-by-case basis.
7. Minimize special uses on isolated lands that would hinder disposal opportunities.

Right-of-Way Grants for Roads and Trails (J02)

Grant easements for all County and State system roads.

Property Boundary Location (J06)

Accomplish boundary survey, posting, and marking in the following priority:

1. Locate boundaries near ongoing resource projects and special management areas (e.g. wilderness).
2. Solve or prevent encroachment and trespass.
3. Assist Forest users in identifying public land areas.

Bury new telephone lines and electric power cables less than 33 KV except where:

1. Burial is not feasible due to geologic hazard or unfavorable geologic conditions;
2. Greater long-term site disturbance would result; or
3. It is not technologically feasible.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Encroachment (J10)

Take timely action to resolve occupancy trespasses. Special use options should only be used after consideration of all other resolution possibilities, and where public need has not been demonstrated to be over-riding during the permit period.

Land Ownership Planning/Land Classification (J11)

Develop a land ownership pattern that will provide maximum efficiency in administration of the San Juan National Forest lands. This will involve land exchange, acquisition and jurisdictional transfers. Cooperate with other agencies to effect jurisdictional transfers which achieve the following objectives:

1. Reduce duplication of efforts by users and agencies in terms of time, cost and coordination.
2. Improve or maintain user access to the administering agency.
3. Decrease travel and enhance management.
4. Improve public understanding of applicable laws, regulations, policies and procedures.
5. Develop more effective and efficient work units.
6. Reduce administrative cost.

Rights-of-Way Acquisition (J18)

Acquire rights-of-way where access needs are identified by means of purchase, donation, agreement, or condemnation.

SOILS

Soil Resource Planning (K03)

Maintain soil productivity, minimize man caused soil erosion, and maintain the integrity of associated ecosystems.

1. Use only site preparation methods that will keep fertile, friable topsoil essentially intact.
2. Return areas in need of physical or chemical restoration to natural vegetation potential on a priority basis.
3. Give roads and trails special design considerations to prevent resource damage on capability areas containing soils with high shrink-swell capacity.

Use the following Standards and Guidelines unless more site specific requirements are developed during project design.

1. Use root cutters, in conjunction with brush raking, only if the depth to heavy subsoil (clay, silty clay) is greater than eight inches.
2. Limit intensive ground disturbing activities on slopes greater than 30 percent, on unstable slopes and highly erodible sites to the following:

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

MANAGEMENT ACTIVITIES

SOILS (Continued)

GENERAL DIRECTION

4. Revegetate all areas, capable of supporting vegetation, disturbed during road construction and/or reconstruction to stabilize the area and reduce soil erosion. Use less palatable plant species on cuts, fills, and other areas subject to trampling damage by domestic livestock and big game to discourage grazing by herbivores.
5. Do not allow livestock and wildlife grazing to reduce the percent of forage to less than the amount needed for watershed protection and plant health.
6. Place tractor-built firelines on the contour where possible and avoid highly erosive sites.
7. Obliterate or restore all new temporary roads or equipment ways and all existing roads which are being removed from the transportation system.

STANDARDS AND GUIDELINES

- a. Limit exposure of mineral topsoil to well distributed small, non-contiguous units which do not exceed 40 percent of an area in aggregate.
 - b. If areas greater than ten acres of highly erosive situation are disturbed, initiate protection measures during and immediately following disturbance. Begin revegetation of disturbed areas before the end of the first growing season. Prepare a proper seedbed at the time of seeding. Also implement erosion control measures other than seeding at this time (e.g. diversions, terraces, mulches, etc.).
 - c. Monitor and reseed if the ground cover as guided in Item 6, below, is not attained within two years.
3. Do not allow skid trails, unsurfaced roads, and other developments promoting compaction to exceed 20 percent of the total area on highly compactible soils. Means of minimizing compaction include designated ski trails, increased road spacing, skidding when dry enough to prevent damage, and off-ground logging systems.
 4. Conduct a slope stability examination before habitation, road construction and/or timber harvest begins on those areas having a high potential for mass movement and areas with slopes greater than 60 percent.
 5. Use mechanical ground lead skidding methods which keep the leading end of the log off the ground; on slopes greater than 30 percent to minimize gouging. Arches, skidding pans, etc. may be used.
 6. Use the following table to determine tolerable soil loss, desired ground cover and forage reserved.

MANAGEMENT ACTIVITIES

SOILS (Continued)

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Geology	Estimated Tolerable Soil Loss Tons/Acre/Yr.	Desired % Ground Cover			% Forage Reserved
		Slope%	%		
			5-8	30-45	
igneous	3-4	10	20	30-45	
		20	20-40	30-45	
		30	35-73	35-55	
		40	35-73	35-55	
		50	40-79	40-60	
		60	45-88	50-80	
hard sedimentary	4-5	10	15-26	30-45	
		20	30-60	35-50	
		30	40-78	35-55	
		40	45-88	40-60	
		50	50-94	45-75	
		60	50-97	55-85	
soft sedimentary	3-4	10	25-50	35-50	
		20	40-79	35-55	
		30	45-93	45-65	
		40	50-97	55-85	
		50	50-100	55-85	
		60	50-100	55-85	
mixed	5	10	5-8	30-45	
		20	20-42	30-45	
		30	30-61	35-50	
		40	35-75	35-55	
		50	40-83	40-60	
		60	45-88	50-80	

FACILITIES

Transportation System Planning and Inventory (L01)

In management area direction, there are standards and guidelines for trail and local road management. These include such things as traffic or use to plan for, construction and reconstruction standards and maintenance levels. However, when prescriptions are applied to the ground, there may be necessary changes because of roads or trails going from one management area to another. In such cases, the road and trail management may change to accommodate overall resource management needs. Also, arterial and collector roads will be necessary for overall travel management and will be constructed to all-weather standards.

Provide cattleguards and gates at fence crossings on all constant entry roads with projected use exceeding 12 seasonal average daily traffic.

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

1. Construct roads and trails to the minimum allowable standard that is consistent with use and purpose and that will safely accommodate projected traffic during design life.
2. Favor reconstruction of existing roads and trails over new construction.
3. Maintain all roads and trails to the level necessary to protect the investment, perpetuate their intended management purpose, protect the environment and provide for user safety.
4. Sign Forest development roads to the standards specified in the Manual of Uniform Traffic Control Devices (MUTCD).
5. Control traffic use and type to meet the road's physical capabilities to accommodate its management purposes, preserve the road investment and accommodate its maintenance requirements. This includes seasonal closures if roadbed damage will occur.
6. Incorporate structures which provide for fish passage in all new roads and trails crossing perennial streams which support a fishery.
7. Close areas to the use of motorized vehicles off Forest development roads when the use would cause unacceptable damage to the soil and water resources.

Limit use to meet estimated tolerable soil loss and desired ground cover as listed under SOILS, Standard and Guideline #6.

PROTECTION

Fire Protection (P02 through P09)

Provide a level of protection from wildfire that will result in the least total cost of suppression, suppression and net value change (cost efficient level) on all areas except those where management direction requires a more intensive level of protection. The cost efficient level of protection was determined through the "1980 Budget Analysis Process." It will result in an estimated average-annual loss of 114 acres to wildfire, Forest-wide.

Fuels Treatment (P11 through P14)

Treat fuels to reduce the wildfire potential. Break up heavy, continuous fuel concentrations with fuel breaks or fire lanes.

Treat fuels so the fireline intensity for an area will not exceed 400 BTU's/second/foot on 90 percent of the days during the regular fire season.

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

In the management of air quality, place emphasis on complying with the Federal Clean Air Act Amendments of 1977. Section 118 requires that all Federal agencies comply with all Federal, State, and local air quality regulations.

1. Locate industrial type uses such as paving plants, crushers, and other uses that create emissions to avoid conflict with visibility goals for designated Class I areas.
2. Permit prescribed burning and naturally occurring fires burning under prescribed conditions for range and wildlife habitat improvement and timber management activities when meteorological conditions are such that inversion and entrapment of pollutants will not exceed legal limits.

Ensure that the Forest is available to all persons for legitimate uses with a minimum of restrictions. Promote visitor safety and protect Forest resources and facilities.

Inform visitors of rules and regulations governing National Forest System lands.

Develop written patrol schedules for use at Forest Service installations during peak periods of activity.

Maintain good cooperation with State, County, and Municipal police agencies.

Expand cooperative operations under existing Sisk-Johnson (Public Law 9282) agreements.

Develop cooperative written patrol schedules with cooperative law enforcement agencies for use at Forest Service installations during peak periods of activity.

Primary responsibility for Search and Rescue is with civil authorities. Notify proper authorities immediately when a search and rescue operation is needed. Forest Service personnel may supervise initial organization of the operation until proper authorities take control.

Primary responsibility for search and rescue is with civil authorities, usually County Sheriff personnel. Forest Service personnel may assist in search and rescue on National Forest System lands when requested by proper authorities.

Air Resource Management (P16)

Law Enforcement (P24)

Cooperative Law Enforcement (P25)

Search and Rescue (P26)

Cooperative Search and Rescue (P27)

FOREST-WIDE MANAGEMENT REQUIREMENTS (Continued)

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Forest Pest
Management

Monitor the Forest for insect and disease infestations.
Monitoring will include:

1. Annual aerial surveys.
2. Ground checking of areas of potential buildup such as timber blowdown, past timber sale activity areas, and vegetation manipulation projects.

Include contractual provisions for beetle traps in timber sales involving spruce cutting.

Suppress pest infestations when resource management objectives are biologically and economically threatened.

MANAGEMENT AREA DIRECTION

The 25 management areas and their associated prescriptions included in this section represent management direction applied to specific areas of land. They provide additional general direction or standards and guidelines not listed in the Forest Direction. Prescriptions for management areas also make the general direction or standards and guidelines listed in the Forest Direction more specific on the area of land to which they have been assigned. They normally do not repeat general direction or standards and guidelines listed in the Forest Direction.

These prescriptions, and others, were used as the basis for developing the alternatives analyzed in the accompanying environmental statement. A management area is assigned the same unique identifier as the prescription applied to it; thereby linking the prescription and land area together. Designations of management areas in this Plan are not consecutive because every prescription is not used in the preferred alternative.

Prescriptions for management areas consist of two major sections: A Prescription Summary section and a section containing Management Activities, General Direction Statements, and Standards and Guidelines. The summary section presents the general description and goals of the prescriptions along with the expected future condition of the area.

The location of the management areas are mapped for the entire Forest and shown on the accompanying Forest Plan map. There are two important exceptions to the mapping and application of prescriptions to shown management areas.

1. This Plan identifies both the Piedra (41,500 acres) and West Needle (15,800 acres) Wilderness Study Areas as suitable for wilderness designation. These areas are shown as containing Management Areas 8_a, 8_b, 8_c, and 8_d, which are wilderness management areas. Until Congress acts, both areas will be managed under Prescription K₃ which is designed to maintain the qualities of an area which make it possible for inclusion in the National Wilderness Preservation System.

The South San Juan Wilderness Expansion Study Area (32,800 acres) is being identified as unsuitable for wilderness designation. The map shows that this area has several management areas which include development in their prescriptions. These prescriptions will not be implemented unless Congress designates this area as non-wilderness. In the interim, this area will be managed under Prescription K₃.

2. Management Area M is not delineated on the Forest Plan map. This management area consists of riparian ecosystems which are either located adjacent to perennial streams, lakes and reservoirs or are other areas with well developed riparian vegetation (primarily intermittent streams). These ecosystems occur through all mapped management areas and are identifiable on the ground through their unique characteristics.

MANAGEMENT AREA SUMMARY

The following summary briefly states the emphasis and shows the amount of area for each management area:

<u>Management Area</u>	<u>Emphasis</u>	<u>Acres</u>
A ₁	High level of livestock production; mechanical practices for range improvement.	26,852
A ₂	High level of livestock production; no mechanical practices for range improvement.	19,924
B	High levels of livestock and timber production; increased water yield; improved wildlife habitat.	241,356
D	High levels of timber production; improved wildlife habitat and recreation.	302,115
E	High quality wildlife habitat; moderate to high timber production on commercial forest land.	41,952
F ₁	High quality wildlife habitat; high timber production on commercial forest land; livestock grazing is excluded from regenerating stands.	25,388
F ₂	Same as F ₁ except limited livestock grazing is permitted in regenerating stands.	125,749
G ₁	Semi-primitive motorized recreation; some grazing; some commercial timber production.	43,579
G ₂	Semi-primitive motorized recreation; some grazing; no commercial timber production.	32,876
H	High quality semi-primitive non-motorized recreation; no commercial timber production.	266,888
I	Winter sports sites.	9,609
J	Scenic qualities along travel routes.	57,619
8	Wilderness	
8 _a	- Very high levels of solitude; very high opportunities for challenge, risk, self-reliance and initiative.	322,944
8 _b	- High levels of solitude; high opportunities for challenge, risk and self-reliance.	44,320
8 _c	- Moderate levels of solitude; moderate opportunities for challenge, risk and self-reliance.	42,240
8 _d	- Low levels of solitude; low opportunities for challenge, risk and self-reliance.	8,480

<u>Management Area</u>	<u>Emphasis</u>	<u>Acres</u>
K ₃	Maintenance of the qualities of an area which make it possible for inclusion in the National Wilderness Preservation System; to be used on all wilderness study areas, regardless of the Plan's recommendation, until Congress acts (acres are shown within other management areas).	(90,100)
L ₂	Chimney Rock Archaeological Area, increased public use.	3,160
M	Riparian areas	38,407
N ₁ , N ₂ , N ₃	Wild and Scenic River corridors	18,221
O	Research Natural Areas	2,302
Q	Developed recreation sites (acres are contained within other management areas).	(562)
R	Low to moderate livestock production; low density dispersed recreation; no commercial timber production.	<u>193,801</u>
TOTAL AREA		1,867,782

PRESCRIPTIONS FOR MANAGEMENT AREAS

The following pages consist of prescriptions for the management areas. They are in the same order as listed above.

PREScriptions FOR MANAGEMENT AREAS A₁ AND A₂

These prescriptions are designed to increase livestock production on a sustained yield basis. This summary section discusses both prescriptions to point out similarities and differences. The summary is followed by management requirements (General Direction and Standards and Guidelines) for each of the prescriptions.

In both prescriptions, emphasis is upon increasing forage production; improving forage composition; improving watershed condition; and increasing red meat and animal fiber production. Under Prescription A₁, high investments will be made in both structural and non-structural range improvements including extensive vegetation manipulation. Non-structural range improvements include mechanical practices such as brush raking, contour plowing, disking, drill seeding, etc., in addition to control and improvement of vegetation through prescribed burning, etc. Wildlife improvements will be minimal with very low investments. Prescription A₂ varies from Prescription A₁ in that investments for non-structural range improvements do not include mechanical practices. All other management practices remain the same under these two prescriptions.

Investment for other resources will be minimal, although resource management activities compatible with livestock production will continue. "Rural" recreation opportunities will be provided in a highly modified setting. Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned; however, timber may be harvested for enhancement of the range resource or insect and disease control. There will not be a balanced age class distribution of woody plants on commercial and non-commercial forest land at the end of one rotation. Wildlife habitat will not be emphasized, resulting in degradation of habitat for some species and a possible reduction in wildlife numbers. System roads will be managed for a low density. Road maintenance costs will be average.

PREScription FOR MANAGEMENT AREA A₁

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with livestock grazing. Limit interpretation to low cost developments such as interpretive signing.

Visual Resource Management (A03, A04)

Meet the visual quality objective of "Maximum Modification" as a minimum for all activities.

Dispersed Recreation (A14, A15)

Manage for "Rural" recreation as the primary recreation activity.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)
2. Restrict use to resolve people/livestock conflicts, favoring livestock in such conflicts. Inform recreationists where livestock are grazing and what temporary limitations exist on motorized recreation in those areas.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

3. Use firewood gathering as a means of obtaining desired diversities of oakbrush.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Use low investments to favor indicator species.

Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee:

Provide two water sources/section in deficient low elevation areas where water is available in less than one source per section.

Goshawk:

Prevent management activities within 300 feet of any known occupied raptor nest during the period of May 1 through July 31.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

RANGE

Range Resource Management (D02)

Manage suitable vegetation types for increased sustained livestock production.

1. Manage livestock through activities such as herding, riding, salting, and livestock pest control.
2. Use improved management systems such as rest-rotation, and deferred-rotation.
3. Manage predatory animals as a viable part of the forest fauna. Control or prevent damage to livestock by altering grazing practices and eliminating individual predatory animals causing damage. Limit control to "non-chemical" means, and restrict control in human use areas.

1. Utilize 40 to 45 percent of usable forage production for livestock.

2. Bring all rangeland up to "fair" or better condition by 1989 and have a stable or upward trend. This may involve temporary or permanent reductions in permitted live-stock.

Range Forage Improvement (D03)

Invest in non-structural range improvements.

1. Control noxious weeds in cooperation with counties and other government agencies.
2. Reduce permitted stocking to protect range revegetation projects until improvement is achieved.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural range improvement practices.

PREScription FOR MANAGEMENT AREA A₁ (Continued)

MANAGEMENT ACTIVITIES

Range Structural Improvements (D05) and Maintenance (D06)

GENERAL DIRECTION

Invest in structural range improvements necessary to implement improved management systems.

TIMBER

Manage timber for the enhancement of the range resource and insect and disease control.

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

Minerals Management - Leasables

See Forest-wide Management Requirements.

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered vegetation species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

STANDARDS AND GUIDELINES

LANDS

Land Exchange and Acquisition (J13, J15)

Consolidate ownership when livestock production is enhanced. Identify isolated parcels of National Forest land available for exchange. Identify non-National Forest lands within Forest boundary for possible acquisition.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Emphasize maintenance of existing facilities over construction or reconstruction of roads and trails.

1. Allow motorized travel off development roads and trails except:

a. Close areas of big game winter range to snowmobiles and other motorized vehicles during winter.

b. Close areas when motorized use prevents livestock forage utilization objectives from being met.

2. Manage roads and trails to accommodate medium-light (0-20 SADT) seasonal constant annual use to intermittent use.

3. Close local intermittent roads to general public use at all times.

4. Construct additional facilities for livestock management (i.e. stock truck turn-arounds) as appropriate.

1. Maintain local intermittent roads to maintenance level two when open for project activities.

2. Maintain local constant roads to maintenance level two.

3. Maintain trails to maintenance level two.

4. Manage the area for a low density (up to one mile/square mile) of system roads.

PROTECTION

See Forest-wide Management Requirements.

See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

VEGETATION MANAGEMENT AND DIVERSITY

Manage vegetation types to achieve habitat and cover distribution that provides for high range resource outputs.

Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned; however, some volume may become available through range betterment practices, but not on a regulated basis. Regeneration of existing stands will be natural and will not be assured within five years of harvest. Site specific diversity objectives for wildlife will not be achieved.

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives.

PREScription FOR MANAGEMENT AREA A₂

STANDARDS AND GUIDELINES

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

RECREATION	Same as Prescription A ₁	
WILDLIFE	Same as Prescription A ₁	Same as Prescription A ₁
RANGE	Same as Prescription A ₁	Same as Prescription A ₁
TIMBER	Same as Prescription A ₁	Same as Prescription A ₁
WATER	Same as Prescription A ₁	
MINERALS AND GEOLOGY	Same as Prescription A ₁	
LANDS	Same as Prescription A ₁	
SOILS	Same as Prescription A ₁	
FACILITIES	Same as Prescription A ₁	Same as Prescription A ₁
PROTECTION	Same as Prescription A ₁	Same as Prescription A ₁
VEGETATION MANAGEMENT AND DIVERSITY	<p>Manage vegetation types to achieve habitat and cover distribution that provides for high range resource outputs.</p> <p>Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned; however, some volume may become available through range betterment practices, but not on a regulated basis. Regeneration of existing stands will be natural and not be assured within five years of harvest. Site specific diversity objectives for wildlife will not be achieved.</p>	<p>See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives.</p>

This prescription is designed to increase the production and utilization of range forage, increase water yield, improve wildlife habitat, and maintain a mix of other resource outputs.

Emphasis is upon improved forage composition, increased forage production, watershed improvement and increased red meat and animal fiber production. High investments will be made in structural range improvements. Investments in non-structural range improvements, wildlife habitat improvement, road construction, and wood fiber production and utilization will be low to moderate. Road maintenance costs will be average. A high degree of wildlife diversity will be maintained, although it will be below optimum levels. Recreation will be managed to provide a "Roaded Natural Appearing" recreation opportunity in a moderately modified setting. Wood products will be produced at high levels on most commercial forest land; however, in some areas, wood products will be produced at levels below maximum to allow for livestock production and vegetation diversity.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with other resource uses. Limit interpretation to low cost developments such as interpretive signing.

Visual Resource Management (A03, A04)

Meet visual quality objective of "Modification," except in foreground areas from roads and trails where the visual quality objective of "Partial Retention" will apply.

Dispersed Recreation (A14, A15)

Manage for "Roaded Natural Appearing" recreation as the primary recreation activity.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)
2. Restrict use to resolve people/livestock conflicts, favoring livestock in such conflicts. Inform recreationists where livestock are grazing and what temporary limitations exist on motorized recreation in those areas.
3. Use firewood gathering as a means of obtaining desired diversities of oakbrush.

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

GENERAL DIRECTION

Favor indicator species through resource management activities.

Deer, Elk, and Bear:

Apply the uneven-aged portion of the diversity objectives (See the Vegetation Management and Diversity Chart in Appendix A) to provide the vegetation necessary for protection of unique habitats, i.e., elk wallows, major wildlife crossings and bear dens.

STANDARDS AND GUIDELINES

Deer, Elk, and Bear:

1. Maintain a cover:forage ratio of 30:70 on summer and transitional range. On big game winter range the cover:forage ratio should be 25:75 (the cover to be made up of 15 percent thermal cover and 10 percent hiding cover).
2. Restrict disruptive human activities such as road construction, prescribed burning, timber sale activities, etc., in calving and fawning areas during the last two weeks of May and the first two weeks of June.
3. Provide a wildlife movement corridor 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each square mile where vegetation manipulation projects are occurring.

Hairy Woodpecker and Mountain Bluebird:

Provide 20 snags/10 acres in all forested types. Provide for snag replacement.

Merriam's Turkey:

1. Protect two turkey roost tree clumps/section in all ponderosa pine sale areas, if available. Minimum size of a clump is one-tenth acre.
2. Provide one turkey food station per four square miles in one-third of the known winter concentration areas.
3. Construct two five-acre livestock exclosures/section in known turkey nesting habitat.
4. Provide two water sources/section in low elevation areas where water is less than one source per section.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Abert's Squirrel:

Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/six acres on all ponderosa pine sale areas.

Goshawk:

Prevent management activities within 300 feet of any occupied raptor nest during the period of May 1 through July 31.

Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee:

1. Construct one brush pile (10'x20'x4')/six acres in those sale areas where naturally occurring ground litter has been drastically reduced.
2. Partially fence one out of every three livestock reservoirs to protect lacustrine nesting habitat for small and non-game birds and mammals.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

RANGE

Range Resource Management (D02)

Manage for increased sustained livestock production under high intensity.

1. Manage livestock through activities such as herding, riding, salting, and livestock pest control.
2. Use improved management systems such as rest-rotation and deferred-rotation.
3. Manage predatory animals as a viable part of the fauna. Control only those predatory animals causing undue predation on wildlife or livestock. Limit control to non-chemical means, and restrict control in human use areas.

Utilize 40 percent of usable forage production for livestock. Allow normal livestock utilization in timber regeneration areas.

PRESCRIPTION FOR MANAGEMENT AREA B (Continued)

MANAGEMENT ACTIVITIES

Range Forage Improvement (D03)

Invest in non-structural range improvements.

1. Control noxious weeds in cooperation with counties and other government agencies.
2. Reduce permitted livestock to protect range revegetation projects until improvement is achieved.

Range Structural Improvements (D05) and Maintenance (D06)

Invest in structural range improvements necessary to implement improved management systems.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Manage lands suitable for timber production for the following commercial tree species and silviculture systems.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

2. Aspen on all available and capable lands with even-age (clearcut) system.

3. Other tree species on all available and capable lands with a combination of even-age and uneven-age systems.

Make Christmas trees and small roundwood products, including firewood, available through scheduled intermediate cuts.

STANDARDS AND GUIDELINES

See the Vegetation Management and Diversity Chart in Appendix A for non-structural range improvement practices.

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

WATER

Water Resource Improvement (F05)

Increase local water availability for livestock and wildlife drinking and increase and prolong snowmelt enhancement of soil moisture to increase forage productivity.

1.

See the Vegetation Management and Diversity Chart in Appendix A for vegetation manipulation practices used in Water resource improvement.

Increase water yield in forested areas through vegetation manipulation. In non-forested areas, use snow-pack management techniques.

2.

Use snow fencing in the upper one-third of open slopes (generally high montane meadows or alpine) where snow deposition will occur in protected areas. Structures should be constructed with:

- a. Ridge crest locations with the deep part of the resultant snow drift not more than eight to 10 times the height of the structure.
- b. Perpendicular orientation to prevailing winds.
- c. At least 500 feet of upwind contributing area with little natural snow accumulation and upslope or level terrain.
- d. Northerly to northeasterly exposure of resultant snow drift.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

- 1. Threatened and endangered wildlife essential habitat.
- 2. Threatened and endangered plant species.
- 3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

GENERAL DIRECTION

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

Consolidate ownership when it enhances range, water, or wildlife resources. Classify isolated parcels of National Forest land available for exchange. In areas where intermingled non-National Forest lands constitute a small percentage of the total, emphasize these lands for acquisition.

See Forest-wide Management Requirements.

Favor reconstruction of existing facilities to accommodate livestock and other resource management over new construction.

1. Allow motorized travel off development roads and trails except:
 - a. Close areas of big game winter range to snowmobiles and other motorized vehicles during winter.
 - b. Close areas when motorized use prevents livestock forage utilization objectives from being met.
2. Manage roads and trails to accommodate medium-light (0-20 SADT) seasonal constant annual use to intermittent use.

3. Close local intermittent roads to general public use at all times.

1. Maintain local intermittent roads to maintenance level two when open for project activities.
2. Construct or reconstruct local constant roads to 75 percent modified gravel support. Maintain to maintenance level three.
3. Maintain trails to maintenance level two.
4. Manage the area for a moderate density (one to two miles/square mile) of system roads.

MANAGEMENT ACTIVITIES

LANDS

Land Exchange and Acquisition (J13, J15)

SOILS

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Trail Construction/Reconstruction and Trail System Management (L22, L23)

PRESCRIPTION FOR MANAGEMENT AREA B (Continued)

MANAGEMENT ACTIVITIES

PROTECTION

See Forest-wide Management Requirements.

GENERAL DIRECTION

STANDARDS AND GUIDELINES

See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

VEGETATION MANAGEMENT
AND DIVERSITY

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

PREScription FOR MANAGEMENT AREA D

This prescription is designed to increase the production and utilization of wood fiber, improve wildlife habitat and maintain a mix of other resource outputs.

Emphasis is upon improved wood production and utilization resulting in extensive modification of tree and other vegetative cover. High investments will be made for timber management activities. Investments in other resource areas that are commensurate with high level wood fiber production will be made. Opportunities will generally be moderate for wildlife management and low for dispersed recreation and livestock grazing. Domestic grazing will occur, but not on an even-flow basis. Wildlife species favored by an even distribution of tree age classes will increase. System roads will be managed for a high density. Road maintenance costs will be average.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with other resource uses. Limit interpretation to low cost developments such as interpretive signing.

Visual Resource Management (A03, A04)

Meet the visual quality objective of "Modification" as a minimum in all areas. In foreground areas viewed from relatively sensitive use areas (Sensitivity Levels One and Two), meet the visual quality objective of "Partial Retention."

Dispersed Recreation (A14, A15)

Manage recreation resources to provide "Roaded Natural Appearing" recreation opportunities with emphasis on dispersed use.

1. Permit non-motorized recreation activities yearlong. Refer to management activities under "Facilities" for additional direction relating to roads and trails.
2. Use public firewood gathering as a means to more fully utilize wood fiber.
3. Emphasize opportunities for dispersed motorized recreation and direct people to lesser-used areas. Inform public of management practices, e.g., where livestock are grazing.
4. Develop new trailhead sites and facilities based on need.

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

GENERAL DIRECTION

Favor indicator species through timber management activities.

Deer, Elk, Bear:

Apply the uneven-aged management portion of the diversity objectives (See the Vegetation Management and Diversity Chart in Appendix A) to provide the vegetation necessary for protection of unique habitats; i.e., elk wallows, major wildlife crossings, and bear dens.

STANDARDS AND GUIDELINES

Deer, Elk, Bear:

1. Maintain a cover:forage ratio of 30:70 on summer and transitional range. On big game winter range the cover:forage ratio should be 25:75 (the cover to be made up of 15 percent thermal cover and 10 percent hiding cover).
2. Restrict disruptive human activity such as road construction, prescribed burning, and timber sales in calving and fawning areas during the last two weeks of May and the first two weeks of June.
3. Maintain a wildlife movement corridors 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each one-half square mile where vegetation manipulation projects occur.

Hairy Woodpecker and Mountain Bluebird:

Protect and/or provide 20 snags/10 acres in all forested types. Also provide for snag replacement.

Merriam's Turkey:

1. Protect two turkey roost tree clumps/section in all ponderosa pine sale areas. The minimum size of a clump is to be one-tenth acre.
2. Provide two turkey food stations per four square miles in one-third of the known winter concentration areas.
3. Construct two five-acre livestock exclosures/section in known turkey nesting habitat.
4. Provide two water sources/section in deficient low elevation areas, where there is less than one water source/section.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Abert's Squirrel:

Protect existing or provide one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/six acres on all ponderosa pine sale areas.

Pine Marten:

Within spruce-fir timber sale areas on pine marten habitat, retain at least ten percent of the area in old growth timber (200+ years old) with a canopy closure greater than thirty percent. Canopy openings should not be greater than 300 feet wide.

Goshawk

Prohibit management activities within 300 feet of an occupied raptor nest during the period of May 1 through July 31.

Merriam's Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee:

1. Construct one brush pile (10'x20'x4') every six acres in those sale areas where naturally occurring ground litter has been drastically reduced through prescribed burning, YUM yarding, or other management practices.
2. Fence one-third of one out of every three livestock reservoirs to protect lacustrine nesting habitat for small non-game birds and mammals.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

RANGE

Range Resource Management (D02)

Manage suitable vegetation types for livestock production through moderate investment and management intensity.

Utilize 30 percent of usable forage production for livestock.

1. On commercial forest land, allow forage production and utilization to vary with timber stand condition.
2. Issue grazing permits recognizing the transitory nature of range on commercial forest land. A sustained even flow of domestic forage utilization will not be planned.
3. Construct and maintain trails and travel routes.
4. Provide for proper livestock distribution through herding, riding, salting, and livestock pest control.
5. Utilize improved management systems such as rest rotation and deferred rotation.
6. Exclude livestock from plantation and naturally revegetating areas by pasture management, techniques such as using existing pasture fences, herding, riding or additional fencing at the permittee's expense, if they so desire.

7. Manage predatory animals as a viable part of the fauna. Control only those predatory animals causing undue predation on other wildlife or livestock. Limit control to nonchemical means, and restrict control in human use areas.

Range Forage Improvement (D03)

See the Vegetation Management and Diversity Chart in Appendix A for non-structural range improvement practices.

Range Structural Improvements (D05) and Maintenance (D06)

Invest in structural improvements that can be amortized over the time span that the area is available for grazing. Fences will include gates or cattleguards at roads.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Manage lands suitable for timber production for the following commercial tree species and silviculture systems.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

2. Aspen on all available and capable lands with even-age (clearcut) system.
3. Other tree species on all available and capable lands with a combination of even-age and uneven-age systems.

Make Christmas trees and small roundwood products, including firewood, available through scheduled intermediate cuts.

Manage stands at densities where optimum sawtimber is the final harvest product.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3 "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange and Acquisition (J13, J15)

Acquire intermingled lands of other ownership on a case-by-case basis, especially those which would reduce or eliminate boundary problems or are of high potential for wood fiber production. National Forest lands within the area covered by this prescription will not be available for exchange unless they consist of isolated parcels or are extrusions into private land.

Rights-of-Way Acquisition (J18)

Assure access to areas managed for wood fiber and other resources through rights-of-way acquisition.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Construct and maintain roads and trails to enhance wood fiber production along with a mix of other resource activities. Design most facilities for multi-resource use.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. Allow motorized travel off development roads and trails except for area closures where unacceptable damage to regenerating areas, seedling and sapling stands would occur.

2. Manage constant use roads to accommodate medium - light seasonal use (SAOT 10-50). Regulate seasonal public use by closure if roadbed damage will occur.

3. Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use.

1. Maintain trails to a maintenance level two.

2. Manage the area for a high density (two to four miles/square mile) of system roads.

3. Construct or reconstruct local constant roads to 75 percent modified gravel support. Maintain to maintenance level three.

4. Construct local intermittent roads with no gravel support unless needed to extend logging season. Maintain to maintenance level two when open for project activities.

PREScription FOR MANAGEMENT AREA D (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

4. Provide trails for cross-country skiing, snowmobile, foot, and horse use. Provide parking areas for dispersed recreationists along system roads.

PROTECTION

See Forest-wide Management Requirements.

See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

VEGETATION MANAGEMENT AND DIVERSITY

Manage vegetation types to achieve a high degree of timber resource outputs in conjunction with a moderate degree of vegetation diversity and forage for wildlife and domestic livestock.

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

In stands of interior Douglas-fir and Engelmann spruce-subalpine fir, one or two preparatory cuts may be necessary before a shelterwood harvest cut is implemented. This is to bring previously unmanaged stands into a condition where blowdown risk is at an acceptable level.

This prescription is designed to achieve and maintain the best possible habitat conditions for wildlife.

Emphasis will be upon increasing wildlife numbers, improving watershed conditions, and providing a high degree of vegetation diversity. This prescription will involve extensive modification of existing forest and other vegetative cover. Investments for wildlife habitat improvement will be high in areas where vegetation diversity goals cannot be attained through timber management practices.

Wood products will be produced on most commercial forest land, but at levels below maximum production. Recreation will be managed to provide "Rural" activity opportunities in a highly modified setting. System roads will be managed for a moderate density. Road maintenance costs will be average. Livestock management will be of low intensity to utilize available forage and maintain forage vigor while not degrading wildlife habitat. The number or season of use for permitted livestock will be reduced in some areas.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with wildlife requirements. Limit interpretation to low cost developments such as interpretive signing.

Visual Resource Management (A03, A04)

Meet the visual quality objective of "Maximum Modification" as a minimum for all activities.

Dispersed Recreation (A14, A15)

Manage recreation resources to provide "Rural" recreation opportunities.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)

2. Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts. Inform recreationists about wildlife that may be seen or hunted, about any temporary limitations on recreation use, and about management practices in the area.

3. Use firewood gathering as a means of obtaining desired diversities of oakbrush and fuels reduction.

PREScription for Management Area E (Continued)

MANAGEMENT ACTIVITIES

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

GENERAL DIRECTION

Intensively manage for optimum wildlife habitats. Favor indicator species through resource management activities.

Deer, Elk, Bear:

Apply the uneven-age management portion of the diversity objective (See the Vegetation Management and Diversity Chart in Appendix A) to provide the vegetation necessary for protection of unique habitats; i.e., elk wallows, major wildlife crossings and bear dens.

STANDARDS AND GUIDELINES

Deer, Elk, Bear:

1. Maintain a cover:forage ratio of 40:60 on summer and transitional range. On big game winter range the cover:forage ratio should be 25:75 (the cover to be made up of 15 percent thermal cover and 10 percent hiding cover).

2. Restrict disruptive human activities such as road construction, prescribed burning, timber sale activities, etc., in calving and fawning areas during May, June and July.

3. Provide a wildlife movement corridor 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each one-half square mile where vegetation manipulation projects are occurring.

Hairy Woodpecker and Mountain Bluebird:

Protect and/or provide 30 snags/10 acres in all forested types. Also provide for snag replacement.

Merriam's Turkey:

1. Protect four turkey roost tree clumps/section in all ponderosa pine and mixed conifer sale areas, if available. Where deficient, designate four clumps of the largest DBH presently available for future use. The minimum size of a clump is to be one-tenth acre.

2. Provide two turkey food stations per four square miles in known winter concentration areas.

3. Construct four five-acre livestock exclosures/section in known turkey nesting habitat.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

4. Provide four water sources/section in known turkey habitat.

Abert's Squirrel:

Protect existing or provide one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/two acres on all ponderosa pine sale areas.

Pine Marten:

Within spruce-fir sale areas on pine marten habitat, retain at least 20 percent of the area in the old growth stage (200+ years) with a canopy closure greater than 30 percent. If the canopy is totally eliminated, the opening should not be more than 300 feet wide.

Goshawk:

Prohibit management activities within 300 feet of any occupied raptor nest during the period of May 1 - July 31.

Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee:

1. Construct one brush pile (10'x20'x4')/two acres in those sale areas where naturally occurring ground litter has been drastically reduced.
2. Fence one third of all livestock reservoirs to protect lacustrine nesting habitat for small and non-game birds and mammals.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

PREScription FOR MANAGEMENT AREA E (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

RANGE

Range Resource Management (D02)

Manage suitable vegetation types under low intensity for livestock production, with the intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat.

Utilize 15 to 20 percent usable forage production for livestock in non-regenerating areas.

1. Reduce the number or season of use for permitted livestock where needed to provide sufficient forage for wildlife, especially on big game winter range.
2. Exclude livestock from plantations and naturally revegetating areas by pasture management techniques such as using existing pasture fences, herding, riding or additional fencing at permittee expense, if they so desire.
3. Construct and maintain trails and travel routes.
4. Improve livestock distribution through herding, riding, salting, and livestock pest control.
5. Use simple management systems (e.g. season-long or deferred grazing) unless improved management systems (e.g. rest-rotation or deferred-rotation) can be instituted with a minimum of investment.
6. Maintain predatory animals as a viable part of the fauna. Control only problem predatory animals as needed to prevent undue predation on other wildlife or domestic livestock. Limit control to nonchemical means and restrict control in human use areas.

Range Forage Improvement (D03)

Do not use range cultural practices such as planting or vegetation manipulation to improve forage composition or production.

Range Structural Improvements (D05) and Maintenance (D06)

Construct and maintain allotment boundary fences, drift fences and water developments necessary to implement simple management systems.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Manage lands suitable for timber production for the following commercial tree species and silviculture systems.

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

2. Aspen on all available and capable lands with even-age (clearcut) system.
3. Other tree species on all available and capable lands with a combination of even-age and uneven-age systems.

Make Christmas trees and small roundwood products, including firewood, available through scheduled intermediate cuts.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange and Acquisition (J13, J15)

Acquire and exchange land when management opportunities for wildlife are enhanced without decreasing productivity in other resource areas. Emphasize acquisition of intermingled lands of other ownerships which qualify as key big game winter range. In summer and transitional range areas, acquire lands which contain unique habitats such as major wildlife crossings. In areas of summer range where National Forest land consists of isolated parcels, identify areas as available for exchange unless they contain unique habitats.

Rights-of-Way Acquisition (J18)

Acquire rights-of-way where needed to provide public access for utilization of wildlife resources.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Design transportation facilities to provide maximum economy of timber harvest and safety for the public while giving priority consideration to wildlife needs. Avoid winter range areas and unique wildlife habitats.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. Prohibit motorized travel off development roads and trails except for oversnow vehicle use in areas outside of big game winter range.

2. Manage local constant roads to accommodate medium - light, seasonal use (SADT 10-50). Regulate seasonal public use if roadbed damage will occur and where travel conflicts with natural wildlife movements.

1. Maintain trails to maintenance level two.
2. Manage the area for a moderate density (one to two miles/square mile) of system roads.
3. Construct or reconstruct local constant roads with gravel support needed for timber operations and hauling. Maintain to maintenance level three.
4. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. Maintain to maintenance level two when open for project activities.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- 3. Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use.

PROTECTION

See Forest-wide Management Requirements.

See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

VEGETATION MANAGEMENT AND DIVERSITY

Manage vegetation types to achieve habitat and cover distribution that provides a high degree of vegetative diversity and forage for wildlife in conjunction with moderate timber resource outputs.

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

In stands of interior Douglas-fir and Engelmann spruce-subalpine fir, one or two preparatory cuts may be necessary before a shelterwood harvest cut is implemented. This is to bring previously unmanaged stands into a condition where blowdown risk is at an acceptable level.

PRESCRIPTIONS FOR MANAGEMENT AREAS F₁ and F₂

These prescriptions are designed to achieve and maintain high quality wildlife habitat while managing for a mix of other resource outputs. This summary section discusses both prescriptions to point out similarities and differences. The summary is followed by management requirements (General Direction and Standards and Guidelines) for each of the prescriptions.

Emphasis will be upon increased wildlife numbers and watershed improvement, along with a degree of vegetation diversity that is high but below optimum for wildlife. Livestock management will be of moderate intensity to utilize available forage through application of improved management systems designed to obtain uniform livestock distribution and to improve plant vigor. Prescription F₁ excludes livestock from plantations and naturally regenerating stands. Prescription F₂ permits livestock grazing to a controlled degree within these areas. All other practices remain the same under these two prescriptions.

These prescriptions involve modification of existing forest and other vegetative cover. Investments for wildlife habitat improvement will be high in areas where vegetation diversity goals cannot be attained through silvicultural and other management practices.

Wood products will be produced at high levels on most commercial forest land, although maximum production will be sacrificed to achieve vegetation diversity goals. Recreation will be managed to provide moderate to high quality "Roaded Natural Appearing" recreation opportunities. System roads will be managed for a moderate density. Road maintenance costs will be average to above average.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

Cultural Resource Enhancement (A02; 309)

Visual Resource Management (A03, A04)

Dispersed Recreation (A14, A15)

GENERAL DIRECTION

See Forest-wide Management Requirements.

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with other resource uses. Limit interpretation to low cost developments such as interpretive signing.

Meet the visual quality objective of "Modification" as a minimum for all activities. Foreground areas that may be viewed from more sensitive use areas (Sensitivity Levels One and Two) should have a visual quality objective of "Partial Retention."

Manage recreation resources to provide "Roaded Natural Appearing" recreation opportunities.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)

STANDARDS AND GUIDELINES

PRESCRIPTION FOR MANAGEMENT AREA F₁

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

- 2. Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts. Inform recreationists about wildlife that may be seen or hunted; where livestock are grazing; about any temporary limitations on recreation use; and about management practices in the area.
- 3. Use firewood gathering as a means of obtaining desired diversities of oakbrush and fuels reduction.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Manage wildlife habitat with moderate to high intensity emphasizing vegetation diversity through natural succession and management practices. Design management activities to favor indicator species endemic to particular habitat types.

Deer, Elk, Bear:

Apply the uneven-age management portion of the diversity objectives (See the Vegetation Management Chart in Appendix A) to provide the vegetation necessary for protection of unique habitats; i.e., elk wallows, major wildlife crossings and bear dens.

Deer, Elk, Bear:

- 1. Maintain a cover:forage ration of 40:60 on summer and transitional range. On big game winter range the cover:forage ratio should be 25:75 (the cover to be made up of 15 percent thermal cover and 10 percent hiding cover).
- 2. Restrict disruptive human activities such as road construction, prescribed burning, timber sale activities, etc., within one-fourth mile of identified calving or fawning areas during May, June and July.
- 3. Provide a wildlife movement corridor 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each square one-half mile where vegetation manipulation projects are occurring.

Hairy Woodpecker and Mountain Bluebird:

Protect and/or provide 25 snags/10 acres in all forested types. Also provide for snag replacement.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Merriam's Turkey:

1. Protect three turkey roost tree clumps/section in all ponderosa pine and mixed conifer sale areas, if available. Where deficient, designate three clumps of the largest DBH presently available for future use. The minimum size of a clump is to be one-tenth acre.
2. Provide two turkey food stations per four square miles in two-thirds of the known winter concentration areas.
3. Construct three five-acre livestock exclosures/section in known turkey nesting habitat.
4. Provide three water sources/section in known turkey habitat.

Abert's Squirrel:

Protect existing or provide one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/two acres on all ponderosa pine sale areas.

Pine Marten:

Within spruce-fir sale areas on pine marten habitat, retain at least 20 percent of the area in the old growth stage (200+ years) with a canopy closure greater than 30 percent. If the canopy is totally eliminated, the opening should not be more than 300 feet wide.

Goshawk:

Prohibit management activities within 300 feet of any occupied raptor nest during the period of May 1 - July 31.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee:

1. Construct one brush pile (10'x20'x4')/four acres in those sale areas where naturally occurring ground litter has been drastically reduced.

2. Fence one-third of each livestock reservoir to protect lacustrine nesting habitat for small and non-game birds and mammals.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

Utilize 20 to 30 percent of usable forage production for livestock in non-regenerating areas.

RANGE

Range Resource Management (D02)

Manage suitable vegetation types under moderate intensity for livestock production, with the intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat.

1. Reduce the number or season of use for permitted livestock where needed to provide sufficient forage for wildlife, especially on big game winter range.
2. Exclude livestock from plantations and naturally regenerating stands by pasture management techniques such as using existing pasture fences, herding, riding or additional fencing at permittee expense, if they so desire.
3. Improve livestock distribution through herding, riding, salting, and livestock pest control.
4. Use improved management systems such as rest-rotation and deferred-rotation.
5. Construct and maintain trails and travel routes.
6. Maintain predatory animals as a viable part of the fauna. Control only problem predatory animals as needed to prevent undue predation on other wildlife or domestic livestock. Limit control to nonchemical means, and restrict control in human use areas.

MANAGEMENT ACTIVITIES

Range Forage
Improvement (D03)

GENERAL DIRECTION

Invest in non-structural range improvements.

1. Restrict range cultural practices to reseeding to improve forage composition or production in areas to be managed for grass as directed in the Vegetation Management and Diversity Section.
2. Control noxious weeds in cooperation with other government agencies.

Range Structural
Improvements (D05)
and Maintenance (D06)

Invest in structural range improvements necessary to implement improved management systems.

TIMBER

Timber Resource
Management Planning
and Inventories (E00)

Manage lands suitable for timber production for the following commercial tree species and silviculture systems.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

2. Aspen on all available and capable lands with even-age (clearcut) system.
3. Other tree species on all available and capable lands with a combination of even-age and uneven-age systems.

Make Christmas trees and small roundwood products, including firewood, available through scheduled intermediate cuts.

WATER

See Forest-wide Management Requirements.

STANDARDS AND GUIDELINES

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

Minerals Management - Leasables

See Forest-wide Management Requirements.

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange and Acquisition (J13, J15)

Acquire and exchange land when management opportunities for wildlife are enhanced without decreasing productivity in other resource areas. Emphasize acquisition of intermingled lands of other ownerships which qualify as key big game winter range. In summer and transitional range areas, acquire lands which contain unique habitats such as major wildlife crossings. In areas of summer range where National Forest land consists of isolated parcels, identify areas as available for exchange unless they contain unique habitats.

Rights-of-Way Acquisition (J18)

Acquire rights-of-way where needed to provide public access for utilization of wildlife resources.

PREScription for Management Area F₁ (Continued)

MANAGEMENT ACTIVITIES

SOILS

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Trail Construction/Reconstruction and Trail System Management (L22, L23)

See Forest-wide Management Requirements.

GENERAL DIRECTION

Manage the transportation system to enhance wildlife values, emphasizing local constant use for dispersion of recreationists, hunter access, and pleasure driving, and providing constant service access for wildlife and other resource management. Avoid winter range areas and unique wildlife habitats.

- 1. Allow motorized travel off development roads and trails except:

- a. Close areas of big game winter range to snowmobiles and other motorized vehicles during winter.

- b. Close areas where motorized travel conflicts with natural wildlife movements.

- 2. Manage local constant roads to accommodate medium-light, seasonal use (10-50 SADT). Regulate seasonal public use if roadbed damage will occur and where travel conflicts with natural wildlife movements.

- 3. Manage local intermittent roads to accommodate light use (0-20 SADT). Close to public use.

- 4. Provide trails for cross-country skiing, foot and horse use. Provide parking areas for dispersed recreationists along system roads.

PROTECTION

See Forest-wide Management Requirements.

VEGETATION MANAGEMENT AND DIVERSITY

Manage vegetation types to achieve habitat and cover distribution that provides a high degree of vegetation diversity and forage for wildlife in conjunction with moderate range and timber resource outputs.

In stands of interior Douglas-fir and Engelmann spruce-subalpine fir, one or two preparatory cuts may be necessary before a shelterwood harvest cut is implemented. This is to bring previously unmanaged stands into a condition where blowdown risk is at an acceptable level.

STANDARDS AND GUIDELINES

- 1. Construct local constant roads with gravel support needed for timber operations and hauling. Maintain to maintenance level three.
- 2. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. Maintain to maintenance level two when open for project activities.
- 3. Maintain trails to a maintenance level two.
- 4. Manage the area for a moderate density (one to two miles/square mile) of system roads.

See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

PRESCRIPTION FOR MANAGEMENT AREA F ₂		STANDARDS AND GUIDELINES	
MANAGEMENT ACTIVITIES	GENERAL DIRECTION		
RECREATION	Same as Prescription F ₁		Same as Prescription F ₁
WILDLIFE	Same as Prescription F ₁		
RANGE	Manage suitable vegetation types under moderate intensity for livestock production, with the intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat.	Utilize 20 to 30 percent of usable production for livestock in non-regenerer Reduce utilization by 50 percent in and naturally regenerating stands.	
Range Resource Management (D02)	1. Reduce the number or season of use for permitted livestock where needed to provide sufficient forage for wildlife, especially on big game winter range.		
	2. Improve livestock distribution through herding, riding, salting, and livestock pest control.		
	3. Use improved management systems such as rest-rotation and deferred-rotation.		
	4. Construct and maintain trails and travel routes.		
	5. Maintain predatory animals as a viable part of the fauna. Control only problem predatory animals as needed to prevent undue predation on other wildlife or domestic livestock. Limit control to nonchemical means and restrict control in human use areas.		
Range Forage Improvement (D03)	Invest in non-structural range improvements.		
	1. Restrict range cultural practices to reseeding to improve forage composition or production in areas to be managed for grass as directed in the Vegetation Management and Diversity Section.		
	2. Control noxious weeds in cooperation with other government agencies.		
Range Structural Improvements (D05) and Maintenance (D06)	Invest in structural range improvements necessary to implement improved management systems.		
TIMBER	Same as Prescription F ₁		Same as Prescription F ₁
WATER	Same as Prescription F ₁		

PRESCRIPTION FOR MANAGEMENT AREA F₂ (Continued)

<u>MANAGEMENT ACTIVITIES</u>	<u>GENERAL DIRECTION</u>	<u>STANDARDS AND GUIDELINES</u>
MINERALS AND GEOLOGY	Same as Prescription F ₁	
LANDS	Same as Prescription F ₁	
SOILS	Same as Prescription F ₁	
FACILITIES	Same as Prescription F ₁	Same as Prescription F ₁
PROTECTION	Same as Prescription F ₁	Same as Prescription F ₁
VEGETATION MANAGEMENT AND DIVERSITY	Same as Prescription F ₁	See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

PREScriptions FOR MANAGEMENT AREAS G₁ and G₂

These prescriptions are designed to emphasize high-quality "Semi-Primitive Motorized" recreation opportunities in a predominantly natural or natural appearing environment. This summary section discusses both prescriptions to point out similarities and differences. The summary is followed by management requirements (General Direction and Standards and Guidelines) for each of the prescriptions.

Recreation users will be provided the opportunity to experience moderate isolation from the sights and sounds of man, a sense of independence, and a high degree of interaction with the natural environment. The opportunity will be available to use motorized vehicles capable of safely negotiating primitive roads and trails. Dispersal of recreation users will be encouraged, and density controlled to reduce frequency of encounters. Minimum on-site controls will be present.

Other resource uses will occur to the extent that they are compatible with, or enhance, this type of recreation experience. Investments for livestock will be low and overall numbers and length of season will be low except for designated areas. Facilities will be of rustic materials and provided primarily for resource protection and user safety. Road investments would be low to moderate with average maintenance costs. In Prescription G₁, the commercial forest land will be placed in the "regulated" component; however, wood production will be less than optimum to favor motorized recreation activities. Improved wildlife habitat and vegetation diversity will occur through timber sale coordination; however limited improvements are planned. In Prescription G₂, timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. However, timber may be harvested for the enhancement of the recreation resource or for insect and disease control. Limited wildlife habitat improvement to increase wildlife populations may be provided in order to enhance the recreation experience.

Motorized recreational use will be permitted and encouraged by providing challenging 4X4 roads, trail bike and snowmobiling opportunities.

PREScription FOR MANAGEMENT AREA G₁

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Develop suitable cultural resource properties for public enjoyment through such practices as interpretive signing, stabilization, self-guided trails, etc. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unresolvable conflicts with recreational purposes.

Visual Resource Management (A03, A04)

Emphasize visually acceptable landscape. A visual quality objective of "Retention" will apply throughout foreground and middleground areas. "Partial Retention" will apply in background areas.

1. Foreground: Retain diversity of existing landscape by managing for intolerant species (spruce-fir and aspen clumps).

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

2. Middleground and Background: Maintain size, scale, and shape of created openings to reflect natural occurrences in the landscape. Study size, scale, and shape of existing forms, and ensure that those are repeated by the activity.

Identify potential enhancement opportunities and develop these on a priority basis.

Manage suitable areas to provide "Semi-Primitive Motorized" recreation opportunities.

1. Retain and/or provide 4X4 roads, trails and areas for trail bikes and snowmobiles that offer challenging and diverse opportunities for a motorized recreational experience. Permit non-motorized use; retain and provide foot and horse trails leading away from motorized trails.

2. Provide limited site development, such as rustic facilities, for resource protection and visitor safety. Site modification will be kept to a minimum.

3. Inform visitors of the availability and location of recreational opportunities.

4. Locate trailheads, parking lots and related facilities to aid in dispersing and balancing use throughout the area in accordance with predetermined capacity levels.

Favor indicator species through limited wildlife habitat improvement.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Hairy Woodpecker, Mountain Bluebird:

Provide and protect a minimum of 25 snags per 10 acres. Where snags are below this level, create snags from standing stems that are greater than 10" DBH and over 20 feet tall.

Deer, Elk, Turkey, Mallard, Black Bear, Goshawk:

Provide one water source per section where there are no natural water sources. Use primitive materials for construction.

See the Vegetation Management and Diversity Chart in Appendix A for non-structural wildlife habitat improvement practices.

Prohibit ORV use on areas with slopes over 40 percent, areas with an excessive erosion sensitivity (factor greater than eight) and on sensitive alpine areas.

RANGE

Range Resource Management (D02)

Manage livestock under low intensity to utilize available forage and maintain forage vigor while not degrading the intended recreation experience.

Utilize 20 percent of usable forage production for livestock in non-regenerating areas. Reduce utilization by 50 percent in plantations and naturally regenerating stands.

1. Improve livestock distribution through herding, riding, salting, and livestock pest control.
2. Use simple management systems (e.g., season-long grazing) unless improved management systems, (e.g. rest-rotation, deferred-rotation) can be instituted by using pasture fences already in place or by constructing drift fences as described below.
3. Manage predatory animals as a viable component of forest fauna. Control problem animals only; use no chemicals; restrict control in or near high recreation use areas.

Range Forage Improvement (D03)

Do not use range cultural practices such as planting or vegetation manipulation to improve forage production.

Range Structural Improvements (D05) and Maintenance (D06)

Utilize low investment structural improvements.

1. Construct and maintain allotment boundary fences, drift fences (normally less than one-half mile in length) and water developments necessary to implement simple management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives.
2. Construct and maintain trails and travel routes.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Manage vegetation types to achieve habitat and cover distribution that provides a pleasing visual landscape in conjunction with moderate timber and wildlife resource outputs.

Manage lands suitable for timber production for the following commercial tree species and silviculture systems.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

- 2. Aspen on all available and capable lands with even-age (clearcut) system.
- 3. Other tree species on all available and capable lands with a combination of even-age and uneven-age systems.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

- 1. Threatened and endangered wildlife essential habitat.
- 2. Threatened and endangered plant species.
- 3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard;
 - d. Low visual absorption capacity.

GENERAL DIRECTION

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

Acquire or exchange lands when dispersed motorized recreation opportunities can be enhanced without reducing productivity of other resources. Provide needed public access to the National Forest.

Authorize only new special land uses for which there is an overriding demonstrated public need or benefit, such as public utilities or energy-related facilities. Access to privately-owned property will be authorized with full mitigating measures to protect the environment.

See Forest-wide Management Requirements.

Place high emphasis on motorized road, trail and area use.

1. Allow motorized travel on and off development roads and trails.
2. Emphasize nongraveled roads and trails for motorized recreation use, 4X4 vehicles and trail bikes and snowmobiles.
3. Emphasize local constant use roads for dispersion of recreationists, hunter access, and pleasure driving. Provide cattleguards with gates.

1. Maintain local constant roads to maintenance level three when used for project activities and to maintenance level two for general motorized use.
2. Maintain trails to maintenance level three.
3. Manage the area for a moderate density (one to two miles/square mile) of system roads.

MANAGEMENT ACTIVITIES

LANDS

Land Exchange and Acquisition (J13, J15); Rights-of-Way Acquisition (J18)

Special Use Management (Non-recreation) (J01)

SOILS

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Trail Construction/Reconstruction and Trail System Management (L22, L23)

PREScription FOR MANAGEMENT AREA C₁ (Continued)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS AND GUIDELINES
PROTECTION	See Forest-wide Management Requirements.	See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.
VEGETATION MANAGEMENT AND DIVERSITY	<p>Manage vegetation types to achieve habitat and cover distribution that provides a pleasing visual landscape in conjunction with moderate timber and wildlife resource outputs.</p> <p>In stands of interior Douglas-fir and Engelmann spruce-subalpine fir, one or two preparatory cuts may be necessary before a shelterwood harvest cut is implemented. This is to bring previously unmanaged stands into a condition where blowdown risk is at an acceptable level.</p>	<p>See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.</p>

<u>PRESCRIPTION FOR MANAGEMENT AREA G₂</u>		<u>STANDARDS AND GUIDELINES</u>
<u>MANAGEMENT ACTIVITIES</u>	<u>GENERAL DIRECTION</u>	
RECREATION	Same as Prescription G ₁	Same as Prescription G ₁
WILDLIFE		
Non-structural and Structural Wildlife Habitat Improvement (C03, C06)	Favor indicator species through limited wildlife habitat improvement.	Deer, Elk, Turkey, Mallard, Black Bear, Goshawk: Provide one water source per section where there are no natural water sources. Use primitive or natural appearing materials for construction.
RANGE	Same as Prescription G ₁ , except grazing of livestock allowed to full utilization of 20 percent of usable forage production at all times.	
TIMBER		
Timber Resource Management Planning and Inventories (E00)	Timber harvesting will be done only to meet other multiple use objectives; not to achieve timber production objectives.	
WATER	Same as Prescription G ₁	
MINERALS AND GEOLOGY	Same as Prescription G ₁	
LANDS	Same as Prescription G ₁	
SOILS	Same as Prescription G ₁	
FACILITIES	Same as Prescription G ₁	Same as Prescription G ₁
PROTECTION	Same as Prescription G ₁	
VEGETATION MANAGEMENT AND DIVERSITY	Allow diversity to change through natural succession. No specific vegetation management is planned; however, timber may be harvested for the enhancement of the recreation resource or for insect and disease control. Limited wildlife improvement may also take place.	

PRESCRIPTION FOR MANAGEMENT AREA H

This prescription is designed to emphasize "Semi-Primitive, Non-motorized" dispersed recreation opportunities in a predominantly natural or natural appearing environment.

Recreation users will be provided the opportunity to experience moderate to high levels of isolation from the sights and sounds of man, a sense of independence, and a high degree of interaction with the natural environment. Dispersal of recreation users will be encouraged and user density controlled to reduce the frequency of encounters. Minimum on-site controls and restrictions will be present but unobtrusive.

Other resource uses will occur to the extent that they are compatible with, or enhance, this type of recreation experience. Facilities will normally be of native materials, provided primarily for resource protection and user safety. Sustained nondeclining timber yield is not planned; however, timber may be harvested for enhancement of other resources or insect and disease control. Low investment structural improvements and other low intensity range practices will be used in livestock management to utilize available livestock forage and maintain forage vigor. Limited wildlife habitat improvements to increase wildlife populations may be provided in order to enhance the recreational experience. Only non-motorized use will be allowed, except for administrative and resource management purposes and specifically identified motorized corridors through the area.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Develop suitable cultural resource properties for public enjoyment through such practices as interpretive signing, stabilization, self-guided trails, etc. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unresolvable conflicts with recreational purposes.

Visual Resource Management (A03, A04)

Place emphasis on providing Forest users with a visually acceptable landscape. A visual quality objective of "Retention" will apply throughout foreground and middleground areas. "Partial Retention" will apply in background areas.

1. Foreground: Retain diversity of existing landscape.
2. Middleground and Background: Maintain size, scale, and shape of created openings to reflect natural occurrences in the landscape through activity design.

Identify potential enhancement opportunities and develop these on a priority basis.

STANDARDS AND GUIDELINES

PRESCRIPTION FOR MANAGEMENT AREA H (Continued)

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

Dispersed Recreation
(A14, A15)

GENERAL DIRECTION

Manage suitable areas to provide "Semi-Primitive Non-motorized" dispersed recreation opportunities.

1. Provide facilities and trails for cross-country skiing, foot and horse use, with limited rustic signing for visitor information and dispersal. (Refer to management activities under "Facilities" for additional direction relating to trails.)
2. Provide limited site development, such as rustic facilities for resource protection and visitor safety. Site modification will be kept to a minimum.
3. Inform visitors of the availability and location of recreational opportunities in these areas.

WILDLIFE

Structural Wildlife
Habitat Improvement
(C06)

Hairy Woodpecker, Mountain Bluebird:

Provide and protect a minimum of 25 snags per ten acres. Where snags are below this level, provide snags from standing stems that are greater than 10 inches DBH and over 20 feet tall.

Deer, Elk, Turkey, Mallard, Black Bear, Goshawk:

In areas of historic shortage of dry season water, where there is less than one source per section, create one source per section using rustic materials.

Non-structural
Wildlife Habitat
Improvement (C03)

Limit non-structural wildlife habitat improvement projects to those that will increase wildlife viewing along recreation trails and use areas.

RANGE

Range Resource
Management (D02)

Utilize 20 percent of usable forage production for livestock.

Manage livestock under low intensity to utilize available livestock forage and maintain forage vigor, while not degrading the intended recreation experience.

1. Construct and maintain trails and travel routes.

PRESCRIPTION FOR MANAGEMENT AREA H (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

2. Manage livestock through activities such as herding riding, salting, and application of pesticides.
3. Utilize simple management systems (e.g., season-long grazing) unless improved management systems, (e.g., rest-rotation, deferred-rotation) can be instituted either through pasture fences already in place or by constructing drift fences as described below.
4. Retain predatory animals as a viable component of forest fauna. Control problem animals only; use no chemicals; restrict control in or near high recreation use areas.

Range Forage Improvement (D03)

Do not use range forage improvement practices such as planting or vegetation manipulation.

Range Structural Improvements (D05) and Maintenance (D06)

Utilize low investment structural range improvements. Construct and maintain allotment boundary fences, drift fences (normally less than one-half mile in length) and water developments necessary to implement simple management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Timber harvesting will be done only for enhancement of other resources or insect and disease control; not to achieve timber production.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.

PREScription FOR MANAGEMENT AREA H (Continued)

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

- 2. Threatened and endangered plant species.
- 3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard;
 - d. Low visual absorption capacity.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Special Use Management (Non-recreation) (J01)

Authorize only new special land uses for which there is an overriding demonstrated public need or benefit, such as public utilities or energy-related facilities. Access to privately-owned property will be authorized with full mitigating measures to protect the environment.

Land Exchange and Acquisition (J13, J15)

Acquire and exchange lands when dispersed non-motorized recreation opportunities will be enhanced.

SOIL

See Forest-wide Management Requirements.

PREScription FOR MANAGEMENT AREA H (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

FACILITIES

Local Road Construction, Reconstruction and Maintenance (L12, L13, L19)

Place high emphasis on non-motorized trail and area use. Do not allow motorized travel on or off development roads except for administrative and resource management entry and specifically identified motorized corridors through the area.

1. Maintain system roads to maintenance level two when open for project activities.
2. Maintain trails to a maintenance levels three and four.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. System roads will be constructed or reconstructed with no gravel support. Except for designated routes, roads will be closed to public use.

2. Emphasize trails for hikers, cross-country skiers and horse use.

PROTECTION

Fire Suppression (P08, P09)

See Forest-wide Management Requirements.

Insect and Disease Management-Suppression (P35)

Take control action to meet visual quality objectives or if there is a threat to adjacent management areas or private lands. Otherwise, allow natural ecological processes to occur.

VEGETATION MANAGEMENT AND DIVERSITY

No specific vegetation management is planned; however, timber may be harvested for the enhancement of the recreation resource or for insect and disease control. Limited wildlife habitat improvement may also take place.

This prescription is designed to achieve maximum development of winter sports opportunities on existing and potential sites.

Management will provide for the maintenance, development, and expansion of winter sports sites by the private sector to insure that supply of winter sports opportunities meets demand. Management activities on existing and potential sites will be limited in order to prevent loss of winter sports opportunities. Significant long-term investments in other resources will not be made, although management compatible with winter sports activities will continue. "Rural" or "Urban" recreation will be provided. No investments will be made for system road construction.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

Cultural Resource Enhancement (A02; 309)

Visual Resource Management (A03, A04)

GENERAL DIRECTION

See Forest-wide Management Requirements.

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with winter sports objectives. Limit interpretation to low cost developments such as interpretive signing.

Meet the visual quality objective of "Modification" as a minimum for all activities.

Design facilities to be compatible with color and texture of natural conditions. Designs which do not borrow line, form, color, and texture from the characteristic landscape are unacceptable. The ski area will be designed and constructed to blend lift lines, ski runs, buildings, and related developments with the natural character of the landscape.

Dispersed Recreation (A14, A15)

Provide "Rural" or "Urban" recreation opportunities. Manage areas primarily for downhill skiing; provide year-round developed and dispersed recreation facilities and opportunities when they are compatible with downhill skiing. Provide for the maintenance, development, and expansion of winter sports sites.

1. Provide the opportunity to exercise a wide spectrum of downhill skiing abilities and also for opportunities for activities such as snowplay, sledding, ski jumping, tobogganing, and ice skating, as demand exists.
2. Establish and maintain cross-country skiing, snowshoeing, and snowmobiling opportunities where demand exists, but only to the extent that they do not interfere with downhill skiing.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

WILDLIFE

No specific indicator species management is planned. Some species will benefit from diversity provided within the area through clearing of ski runs and lift lines, and by revegetation to stabilize slopes.

RANGE

Range Resource Management (D02)

Manage livestock under low intensity to utilize available forage and maintain forage vigor while not degrading winter sports sites.

1. Construct and maintain trails and travel routes.
2. Improve livestock distribution through herding, riding, salting, and livestock pest control.
3. Use simple management systems such as season-long or deferred grazing, unless improved management systems such as rest-rotation or deferred-rotation are warranted in conjunction with management of adjacent areas.
4. Establish utilization objectives that are compatible with range resource management of adjacent areas.
5. Control predatory animals as needed, on a case-by-case basis.

Range Forage Improvement (D03)

Do not use cultural practices such as planting and vegetation manipulation to improve forage composition or production.

Range Structural Improvements (D05) and Maintenance (D06)

Use low investment structural improvements. Construct and maintain allotment boundary fences, drift fences and water developments necessary to implement simple management systems.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Timber harvesting will be done only to meet other multiple use objectives; not to meet timber production objectives.

WATER

See Forest-wide Management Requirements.

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

Minerals Management - Leasables

See Forest-wide Management Requirements.

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange and Acquisition (J13,J15); Rights-of-Way Acquisition (J18)

Acquire private lands and rights-of-way to enhance administration of winter sports areas.

Land Uses (J01)

Special uses facilitating administration of winter sports areas will normally be allowed. Other special uses will normally not be authorized unless there is a demonstrated public need or benefit (e.g. public utilities).

SOILS

See Forest-wide Management Requirements.

PREScription FOR MANAGEMENT AREA I (Continued)

MANAGEMENT ACTIVITIES

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Restrict roads to those which are needed for development and administration of winter sports areas.

1. Close areas to motorized vehicles off development roads and trails except for administrative and resource management entry.
2. Develop constant service access to terminal facilities.
3. Provide adequate parking facilities.
4. No new system roads will be constructed. Existing roads may remain; however, most will be under special use permit to the winter sports area.

Manage the area for a low density (zero to one mile/square mile) of system roads.

PROTECTION

Fire Suppression (P08, P09)

Assure protection of winter sports area facilities and site opportunities. Fire protection and suppression will be at a level necessary to prevent losses to human life and minimize losses of developed property and winter sports resources.

Take suppression actions necessary to control wildfires at ten acres or less on 95 percent of the days during the regular fire season.

Treatment of Activity Fuels (P11)

Treat activity generated facts on areas adjacent to winter sports areas where wildfire can threaten life, property or winter sports resources.

Treat fuels so the fireline intensity on the area will not exceed 100 BTU's/second/feet on 90 percent of the days during the regular fire season or break up fuel concentrations into blocks no larger than ten acres.

Insect and Disease Management-Suppression (P35)

Suppress insect and disease outbreaks when winter sports opportunities would be adversely affected.

VEGETATION MANAGEMENT AND DIVERSITY

Limit vegetation management to the degree necessary for lift and ski run construction and maintenance, insect and disease control, or to meet visual quality objectives.

STANDARDS AND GUIDELINES

This prescription is designed to provide a range of "Rural" and "Roaded Natural Appearing" recreation opportunities along sensitive travel routes while enhancing or maintaining scenic values inherent in a forest environment.

This will be accomplished by maintaining or improving visual quality and by providing dispersed recreation opportunities such as hiking and driving for pleasure. Decreases in non-recreation outputs will occur. High investments will be made in road construction, facilities and activities that enhance recreation and the scenic qualities of the landscape. System roads will be managed for a moderate density. Limited investments will be made for other resource uses and outputs.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Develop suitable cultural resource properties for public enjoyment through such practices as interpretive signing, stabilization self-guided trails, etc. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unresolvable conflicts with recreational purposes.

Visual Resource Management (A03, A04)

Preserve inherent scenic values, enhance viewing opportunities, and increase variety where appropriate. Achieve a visual quality objective of "Retention" or "Partial Retention" on seen areas of the view shed.

See the Vegetation Management and Diversity Chart in Appendix A for vegetation manipulation practices used to enhance or maintain visual quality objectives.

1. Foreground: Maintain healthy old growth stands as described in the Vegetation Management and Diversity Section. At selected sites, create vistas, enframe views, and feature focal points by patch cuts or by heavy thinnings. Introduce (plant) and perpetuate aspen species in visually significant areas to offer greater diversity of texture and seasonal color.

Preserve and feature Forest meadows and parks. Harvest in patterns which appear as natural vegetation openings or which emphasize geological features. Design activities to follow the directional emphasis of the landscape, as well as linking units with natural openings.

2. Middle Ground: Control species diversity to produce variations in texture patterns.

Create harvest patterns which appear as natural vegetation openings or rock outcrops. Link harvest units to natural openings.

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

3. Background: Ensure that activities imitate nature in their size, scale, shape and form.

Dispersed Recreation
(A14, A15)

Manage for "Rural" and "Roaded Natural Appearing" recreation opportunities as the primary recreation activity. Provide dispersed recreation opportunities within suitable road corridors and near developed recreation sites.

1. Provide facilities and trails for cross-country skiing, foot and horse use, with rustic signing for visitor information.
2. Provide site development such as parking lots, trail-heads, scenic viewing areas and visitor information signing.

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

Changes in habitat diversity will be accomplished through visual quality management. Strive to provide:

1. Frequent wildlife sightings
2. Diversity of vegetative cover
3. Travel corridors for crossing areas
4. Wildlife trees

RANGE

Range Resource
Management (D02)

Manage livestock under low intensity to utilize available forage and maintain plant vigor while not degrading recreation and scenic values.

1. Construct and maintain trails and travel routes.
2. Improve livestock distribution through activities such as herding, riding, salting and livestock pest control.
3. Utilize simple management systems (e.g. season-long grazing) unless improved management systems (e.g. rest-rotation, deferred-rotation) can be instituted either by using pasture fences already in place or by constructing drift fences as described below.

Utilize 15 to 20 percent of usable forage production for livestock in non-regenerating areas.

4. Allow livestock grazing where it does not detract from recreation and visual objectives. Encourage grazing in some areas to attain variety in the landscape.
5. Exclude livestock from plantations and naturally re-vegetating areas by pasture management techniques such as using existing pasture fences, herding, riding or additional fencing at permittee expense, if they so desire.

Range Forage Improvement (D03)

Do not attempt to maintain or improve forage composition and production through range cultural practices.

Range Structural Improvements (D05) and Maintenance (D06)

Use low investment structural improvements. Do not construct improvements which tend to congregate livestock and cause soil and vegetation disturbance in seen areas.

Construct and maintain allotment boundary fences, drift fences (normally less than one-half mile in length) and water developments necessary to implement simple management systems. Use rustic fences to exclude livestock from developed recreation sites and areas of high recreation activity.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Manage lands suitable for timber production to enhance recreation opportunities, scenic values and maintain healthy conditions. Retain or create irregular appearance, small scale diversity and mature old growth (250 years plus) timber stands. Use noncommercial practices if trees cannot be sold in designed entries of stands.

See the Vegetation Management and Diversity Chart in Appendix A for silvicultural practices.

Manage lands for the following commercial tree species and silviculture systems.

1. Ponderosa pine on available and capable lands above 40 square feet B.A. and below 30 percent slopes with even-age (shelterwood) systems.

Ponderosa pine sites which are presently non-stocked (an existing condition of less than 40 square feet of basal area per acre or equivalent stocking) or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This "unsuitable for timber production" determination does not apply to stands which may be brought below this

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

stocking level through management prescribed in the Vegetation Management and Diversity Chart in Appendix A. The management prescribed there is designed to provide reasonable assurance that the lands can be adequately restocked.

2. Aspen on available and capable lands below 60 percent slopes with even-age (clearcut) system.
3. Other tree species on available and capable lands below 60 percent slopes with a combination of even-age systems.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (601)

Control mineral activity, within legal limits, to the extent that it does not conflict with the provision of high scenic and recreational values.

1. Schedule activities so that conflict is minimized between recreation and mineral activities.
2. Maintain the rights of ingress and egress to meet mineral operators' needs, while protecting other resource values.
3. Ensure that site rehabilitation activities follow approved operating plans, and address visual quality objectives. Ensure that productive capability is returned to a level equal to or greater than that prior to exploration or mining.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- c. High geologic hazard;
- d. Low visual absorption capacity.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

Land Exchange and Acquisition (J13, J15)

Acquire and exchange land when "Rural" recreation opportunities are enhanced without decreasing productivity of other resources and to protect important scenic features and public access to the National Forest.

Special Use Management (Non-Recreation - J01)

Special uses will be considered on a case-by-case basis, but will generally only be approved when they enhance "Rural" recreation opportunities. Discourage location of utilities and other improvements within the view shed. If they must be located in the area, design and maintain to meet the established visual quality objective.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Emphasize local constant-use roads for dispersion of recreationists and pleasure driving.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. Prohibit motorized travel off system roads and trails except for designated areas, corridors, parking areas and camping areas.
2. Manage for medium to high use (SADT above 50) and construct to all season standard.
1. Maintain system roads to maintenance levels four and five.
2. Maintain trails to maintenance levels four and five.
3. Manage the area for a moderate density (one to two miles/square mile) of system roads.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- 3. Abate dust on high use (SADT above 195) roads.
- 4. Construct trails for hiker dispersion in problem areas.

PROTECTION

- Fire Suppression (P08, P09)
- Treatment of Activity and Natural Fuels (P11, P12)
- Insect and Disease Management-Suppression (P35)

Modify techniques used in fuel treatment, presuppression, suppression, and insect and disease control activities to achieve recreation and visual quality objectives.

- 1. Use prescribed fire to retain or create areas suitable for recreation use, as well as to create desirable visual characteristics through slash disposal and species manipulation.
- 2. Fire suppression and control techniques shall be sensitive to visual quality objectives.
- 3. Aggressively control insects and diseases.

- 1. Take suppression actions necessary to control wildfires at ten acres or less on 95 percent of the days during the regular fire season.
- 2. Treat fuels on areas where wildfire can threaten lives or property so the fireline intensity on the area will not exceed 100 BTU's/second/feet on 90 percent of the days during the regular fire season.
- 3. See the Vegetation Management and Diversity Chart in Appendix A for prescribed fire practices.

VEGETATION MANAGEMENT AND DIVERSITY

Manage vegetation types to achieve a vegetation distribution that provides a pleasing visual landscape in conjunction with high quality dispersed recreation opportunities and moderate timber, range and wildlife resource outputs.

In stands of interior Douglas-fir and Engelmann spruce-subalpine fir, one or two preparatory cuts may be necessary before a shelterwood harvest cut is implemented. This is to bring previously unmanaged stands into a condition where blowdown risk is at an acceptable level.

See the Visual Resource Management Section for additional direction.

See the Vegetation Management and Diversity Chart in Appendix A for managing vegetation for all resource objectives. Use the specified regeneration silvicultural practices for the respective species at least 80 percent of the time. Specific site characteristics may require some other regeneration silvicultural practice in some areas.

PREScriptions FOR MANAGEMENT AREAS 8_a, 8_b, 8_c, AND 8_d

These prescriptions provide for wilderness management in accordance with the Wilderness Act of 1964, Public Law 93-632, 1/5/75, and Public Law 96-560, 12/22/80. The objective of these prescriptions is to provide predominantly untrammelled natural environments of the physical, biological and social components of wilderness. The physical and biological components are managed so that natural processes are unimpeded by human activity and use. Inherent biological processes show essentially no influence of man. Natural processes, including naturally occurring fire, soil erosion and insect and disease cycles proceed unrestricted by human activities.

Opportunities are provided for users to experience essentially unmodified natural ecosystems with minimum restrictions on visitor numbers and activities. Emphasis is on isolation from the sights and sounds of mechanized human activities, solitude, self-reliance and challenge while traveling cross-country or on established trails of varying degrees of difficulty. The degree of solitude and travel difficulty is more specifically described in the management direction given in management prescriptions for Transition, Semi-Primitive, Primitive and Pristine recreation opportunities.

Other resource activities authorized by wilderness legislation or regulation are integrated into the overall wilderness management. The goal is to minimize trammeling of natural environments and opportunities for solitude, and to satisfactorily re-establish those characteristics if they become trammelled beyond established acceptable levels of change.

PREScription FOR MANAGEMENT AREA 8_a (Pristine Recreation Opportunity)

This prescription emphasizes the highest level of solitude, very few (rare) party encounters, very high opportunities for challenge, risk, self-reliance and initiative, very low level of on-site public safety (very high level of woodsmanship/mountaineering skills is assumed of visitor), and very low to no Forest Service administration/public contact. Travel is cross-country, utilizing natural travelways (game trails) or requiring a high degree of skill (mountaineering or orienteering).

Management activities are integrated in such a way that evidence of current human use, including permitted and recreation livestock, is not noticeable the following season to the wilderness user, or so that natural biological processes are not adversely or artificially changed over time by human use.

PREScription FOR MANAGEMENT AREA 8_b (Primitive Recreation Opportunities)

This prescription emphasizes high levels of solitude, few party encounters, high opportunities for challenge, risk, and self-reliance, low level of on-site public safety (high level of woodsmanship skills is assumed of visitor), and a low degree of Forest Service administration/public contact. Human travel is cross-country or by use of a low-density constructed trail system.

PREScription FOR MANAGEMENT AREA 8_c (Semi-Primitive Recreation Opportunities)

This prescription emphasizes moderate levels of solitude, some party encounters, moderate opportunities for challenge, risk, and self-reliance, moderate level of on-site public safety (reasonable level of woodsmanship skills is assumed of visitor), and a moderate degree of Forest Service administration/public contact. Management activities are integrated in such a way that current human use leaves only limited and site-specific evidence of their passing. Unacceptable levels of past use are rehabilitated and the affected area restored. Human travel is principally on constructed arterial trails. Campsites are used and show evidence of repeated, but acceptable levels of use.

PREScription FOR MANAGEMENT AREA 8_d (Transition Recreation Opportunities)

This prescription emphasizes low levels of solitude, many party encounters, low opportunities for challenge, risk, and self-reliance, high level of on-site public safety (low level of woodsmanship skills is assumed of visitor), and a high degree of Forest Service administration/public contact. Management activities are integrated in such a way that the bio-physical wilderness resources are protected from unacceptable change, and day-users are made aware of the purposes of wilderness management. Management is directed towards providing a generally natural appearing setting with very high densities of predominantly day-users. An arterial trail system directs the user within the area and leads the overnight user quickly through to other management areas. There are no developed sites. Facilities such as bridges, etc., necessary for user safety or bio-physical resource protection may be present.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Management (A02)

Allow no development of cultural resources for recreational purposes.

Allow use of identified cultural resource properties for religious, other socio/cultural or research purposes only when such use will not degrade wilderness values.

Visual Resource Management (A03, A04)

Manage for maximum retention of the natural landscape. Design and locate management activities to meet the visual quality objective of "Preservation" in all areas except where specific surface occupancy is authorized by wilderness legislation. In these areas, the visual quality objective is "Retention."

Dispersed Recreation (A14, A15)

Emphasize opportunities for primitive and unconfined recreation activities featuring solitude, the chance to experience unmodified natural ecosystems, and to travel cross-country in an environment where success or failure is directly dependent on ability, knowledge and initiative.

Limit direct controls on visitor use to those specified in the standards and guidelines. Do not provide for direct control of use, party size, or number of recreation livestock through permit systems. Manage use through informational services, Ranger District Office contacts, trailhead information stations, and field contacts. Use these methods to encourage limits on group size to approximately 15 persons and 23 head of recreation livestock and the use of low impact camping methods. Use voluntary registration as an information gathering and management tool.

WILDERNESS

Wilderness Research (B05)

Provide for research and education opportunities that are compatible with wilderness objectives and dependent on a wilderness environment. Give high priority to recreational use and human behavior as research projects.

WILDLIFE

Permit fish and wildlife research and management according to the policy and guidelines adopted by the International Association of Fish and Wildlife Agencies. (FSM 2323.3).

1. Dogs will remain under voice or physical control.
2. Recreation stock will be held outside of foreground of lakes, streams, and trails and grazing controlled to at least 200 yards from lake shorelines and 100 yards from primary trails.
3. Permit overnight camping on undesignated sites in Frissell condition classes one through three. Close and restore sites in Frissell condition classes four and five.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Allow the natural distribution and population of wildlife species indigenous to the area to maintain a natural balance with habitat, each other, and man.

1. Manage the designated river otter habitat along the Piedra River extending into the wilderness under the joint agreement with the Colorado Division of Wildlife.
2. Retain predatory animals as a viable component of the forest fauna.

FISHERIES

Non-Structural Fish Habitat Improvement (C04, C07)

Allow aerial fish stocking only in waters previously stocked in that manner prior to establishment of the wilderness.

1. Determine species to be stocked based on historical stocking records.
2. Schedule stocking during low use periods whenever possible.

RANGE

Range Resource Management (D02)

Graze livestock with the intent to utilize available forage and maintain forage vigor.

Prohibit pack and saddle stock at least 200 feet from lakes and streams except for watering and through-travel.

1. Maintain range forage condition in "good" or better condition with a stable or upward trend. Utilization standards will vary with grazing systems and range condition. Utilization objectives will be 20-30 percent for livestock.
2. Resolve specific conflicts (i.e., high country sheep grazing) through herding, riding, salting, and specific utilization objectives.
3. Control noxious weeds and cooperate with other governmental agencies in control efforts.

Range Forage Improvement (D03)

Do not use range cultural practices such as planting or vegetation manipulation to improve forage composition or production.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Range Structural Improvements (D05) and Maintenance (D06)

Emphasize primitive, natural material for water developments and range structures.

Implement revegetation only for rehabilitation of areas in less than "good" condition based upon their natural potential. Implement only where natural revegetation possibilities are poor, and only where degradation is due to human activities.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Forest land is "unavailable" for timber harvest.

WATER

Water Resource Improvements (F05)

Maintain water quality or establish acceptable standards in cooperation with the State where management techniques may reduce existing water quality.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

Administer all mineral activities as required in 36 CFR, Parts 228 and 293, FSM 2300 and 2800, and Section 4(d)(2) and (3) of the Wilderness Act of 1964.

The number of operation inspections will be commensurate with the potential for resource damage and/or the activity level of each operation.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

- 1. Threatened and endangered wildlife essential habitat.
- 2. Threatened and endangered plant species.
- 3. High resource sensitivity based on:
 - a. Slopes steeper than 40 percent;
 - b. High erosion hazard;
 - c. High geologic hazard;

MANAGEMENT ACTIVITIES

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STANDARDS AND GUIDELINES

d. Low visual absorption capacity.

4. Lands leasable under the above conditions which would result in "islands" because access, etc., would be necessary across land which could not be restored as near as practical to natural conditions.

An exception to the above is where the first three conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include the following stipulations in all leases:

1. BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture."
2. Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation."
3. Forest Service (R-2) Supplement R (for oil, gas and geothermal) or Supplement S (for other leasables) to Form 3109-3, "Wilderness Stipulations."

Require Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation," when high levels of mineral activity are proposed in environmentally sensitive areas.

Land Exchange and Acquisition (J13, J15)

Special Use Management (J01)

Pursue acquisition of private lands within and adjacent to wilderness which threaten wilderness values and resources.

Permit existing facilities (presently allowed by regulations/policies) to remain under special use management. Allow no new facilities except those authorized through provisions of the Wilderness Act. Remove existing non-conforming structures unless they are determined to be of cultural or historical value.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

SOILS

Maintain soils in a stable or upward trend. Rehabilitate disturbances caused by man to restore natural ecological processes.

1. Stabilize and rehabilitate man-caused disturbances.
2. Determine campsite condition for degradation. Close or rehabilitate sites in unacceptable conditions.

FACILITIES

Trail Construction/
Reconstruction and
Trail System Manage-
ment (L22, L23)

Do not construct or maintain trails in this management area. Visitors are left to their own initiative and personal devices to travel in this area.

1. No bridge or ford construction.
2. No trailhead facilities associated with management areas.
3. No interior signing.

PROTECTION

Insect and Disease
(P35, P39)

Allow forest disease and insect outbreaks to run a natural course, except controlled action will be taken where there is clear and eminent danger to resources on adjacent lands.

Fire Suppression
(P08, P09)

Perpetuate and maintain the ecosystems within the wilderness by the natural occurrence of fire.

Treatment of Activity
and Natural Fuels
(P11, P12)

1. Suppression action will be initiated on fires which threaten to create unacceptable levels of air pollution.

1. Immediate suppression action will be taken on:

- a. All man-caused fires.
- b. Fires which threaten human lives, public and private property, or fires which threaten to escape from the wilderness to adjacent areas with more restrictive fire prescriptions.

2. Suppression action will be taken on natural fires occurring in the Florida River Municipal Watershed Fire Management Unit to restrict fire size to less than 250 acres. If other municipal watersheds are identified, similar fire size limitations will be developed.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- 3. Natural (lightning-caused) fires occurring in the remainder of the wilderness will be managed under prescribed conditions.
- 4. The use of bulldozers or other motorized equipment must be approved by the Regional Forester and will be requested only when there is an eminent threat to human life, private property, or resources outside the wilderness.

VEGETATION AND DIVERSITY
MANAGEMENT

Protect and maintain natural conditions and processes of plant communities. Allow natural processes to occur.

Revegetate only where unacceptable disturbance has occurred due to human activities and natural revegetation possibilities are poor.

PREScription FOR MANAGEMENT AREA 8_b (Primitive)

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Management (A02)

Same as Prescription 8_a

Visual Resource Management (A03, A04)

Same as Prescription 8_a

Dispersed Recreation (A14, A15)

Same as Prescription 8_a, except place less emphasis on isolation and solitude.

Same as Prescription 8_a

WILDERNESS

Same as Prescription 8_a

WILDLIFE

Same as Prescription 8_a

FISHERIES

Same as Prescription 8_a

RANGE

Same as Prescription 8_a

Same as Prescription 8_a

TIMBER

Same as Prescription 8_a

WATER

Maintain water quality or establish acceptable standards in cooperation with the State where management techniques may reduce existing water quality.

Correct erosion sources in trail corridors.

MINERALS AND GEOLOGY

Same as Prescription 8_a

LANDS

Same as Prescription 8_a

SOILS

Maintain soils in a stable or upward trend. Limit erosion sources in immediate trail corridors. Rehabilitate disturbances caused by man to restore natural ecological processes.

Correct trail erosion problems to standards established in R-2 Trail Standards Handbook (FSH 7709.12).

1. Stabilize and rehabilitate man-caused disturbances.
2. Determine campsite condition for degradation. Close or rehabilitate sites in unacceptable condition.

MANAGEMENT ACTIVITIES

FACILITIES

Trail Construction/
Reconstruction and
Trail System Manage-
ment (L22, L23)

Construct only trails identified as absolute necessities.
Maintain existing trails to provide a low level of on-site
public safety.

1. Use native or natural materials in trail construction.
Metal culverts will be phased out.
2. Bridges or constructed low water fords will not be
allowed in the primitive area.
3. Locate few trailhead facilities associated with this
management area outside the wilderness. Provide
facilities commensurate with the use level associated
with this management area (parking for one to five
vehicles, very low signing, limited visitor infor-
mation).

4. No interior signing.

PROTECTION

Same as Prescription 8_a

VEGETATION AND
DIVERSITY MANAGEMENT

Same as Prescription 8_a

STANDARDS AND GUIDELINES

Construct or maintain trails to maintenance
level one. Maintain trails in accordance to
standards in Trail Handbook (FSH 7709.12).

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Management (A02)

Visual Resource Management (A03, A04)

Dispersed Recreation (A14, A15)

GENERAL DIRECTION

Same as Prescription 8_a

Same as Prescription 8_a

Limit direct controls on visitor use to those specified in the standards and guidelines. Do not provide for direct control of use, party size, or number of recreation livestock through permit systems. Manage use through informational services, Ranger District Office contacts, trail-head information stations, and field contacts. Use these methods to encourage limits on group size to approximately 15 persons and 23 head of recreation livestock and the use of low impact camping methods. Use voluntary registration as an information gathering and management tool.

STANDARDS AND GUIDELINES

1. Dogs will remain under voice or physical control at all times.
2. Recreation stock will be held outside of foreground of lakes, streams, and trails and grazing controlled to at least 200 yards from lake shorelines and 100 yards from primary trails.
3. Permit overnight camping on undesignated sites in Frissell condition classes one through three. Close and restore sites in Frissell condition classes four and five.
2. Specific, more restrictive closures, will be on a case-by-case basis as posted and illustrated on maps. Specific closures within the Weminuche semi-primitive zone are:

A. Emerald Lake

1. No camping or recreation stock grazing within one-quarter mile of shoreline on east side.
2. No camping or recreation stock grazing within one-half mile of shoreline on north side.

B. Little Emerald Lake

1. No camping or recreation stock grazing within one-quarter mile of shoreline of the lake.
2. Limit occupancy of campsites to five consecutive days.
3. Allow no camp improvements of a permanent nature. All camping improvements to be removed after use of site (five days maximum.)

STANDARDS AND GUIDELINES

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MANAGEMENT ACTIVITIES

WILDERNESS	Same as Prescription 8 _a	
WILDLIFE	Same as Prescription 8 _a	
FISHERIES	Same as Prescription 8 _a	
RANGE	Same as Prescription 8 _a	Same as Prescription 8 _a except allow range permittee motorized access to Lizard Head Wilderness, into Alexander Pond and Ditch. Sec. 15, 22, T42N, R10W.
TIMBER	Same as Prescription 8 _a	
WATER	Same as Prescription 8 _b	
MINERALS AND GEOLOGY	Same as Prescription 8 _a	
LANDS		
Land Exchange and Acquisition (J13, J15)	Same as Prescription 8 _a	Granite Peak Guard Station (FS) and Raber Ditch Cabin (Colorado Division of Wildlife) will remain within the Weminuche Wilderness for administrative and historical use.
SOILS	Same as Prescription 8 _b	
FACILITIES		
Trail Construction/ Reconstruction and Trail System Management (L22, L23)	Construct and maintain trails and bridges to facilitate distribution of users and to provide a moderate level of on-site public safety.	Construct and maintain trails to a level two. Maintain trails in accordance to standards in Trail Handbook (FSH 7709.12).
	1. Use native or natural materials in trail and bridge construction. Metal culverts will be phased out.	
	2. Provide bridges only to protect health and safety of the wilderness user.	

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

- 3. Locate trailhead facilities outside the wilderness. Provide facilities commensurate with the use level associated with this management area (parking for five to ten vehicles, minimal signing, moderate visitor information).
- 4. Provide and maintain signs for public safety as follows:
 - a. Use standard Forest Service trailways, trail posts, and rock cairns. Signs are to be natural appearing wood with routed letters.
 - b. All trail junctions and trailheads will be signed without destination distances indicated. Phase out existing non-conforming signs.

PROTECTION

Same as Prescription 8_a

Same as Prescription 8_a

VEGETATION AND DIVERSITY MANAGEMENT

Same as Prescription 8_a

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Management (A02)

Same as Prescription 8_a

Visual Resource Management (A03, A04)

Same as Prescription 8_a

Dispersed Recreation (A14, A15)

Limit direct controls on visitor use to those specified in the standards and guidelines. Do not provide for direct control of use, party size, or number of recreation livestock through permit systems. Manage use through informational services, Ranger District Office contacts, trail-head information stations, and field contacts. Use these methods to encourage limits on group size to approximately 15 persons and 23 head of recreation livestock and no camping in this management area. Use voluntary registration as an information gathering and management tool.

1. Dogs will remain under voice or physical control.
2. Prohibit outfitter-guide operations, except for through-travel.
3. Close and restore campsites in Frissell condition classes four and five.

WILDERNESS

Same as Prescription 8_a

WILDLIFE

Same as Prescription 8_a

FISHERIES

Same as Prescription 8_a

RANGE

Same as Prescription 8_a

Same as Prescription 8_a

TIMBER

Same as Prescription 8_a

WATER

Same as Prescription 8_b

MINERALS AND GEOLOGY

Same as Prescription 8_a

LANDS

Same as Prescription 8_b

SOILS

Same as Prescription 8_a

MANAGEMENT ACTIVITIES

FACILITIES

Trail Construction/
Reconstruction and
Trail System Manage-
ment (L22, L23)

GENERAL DIRECTION

Construct and maintain trails and bridges to facilitate distribution of users and to provide high level of on-site public safety.

1. Use native or natural materials in trail construction. Metal culverts will be phased out.
2. Provide bridges only where foot and horse use cannot safely cross and to protect soil and water resources. Use rustic construction.
3. Locate trailhead facilities outside the Wilderness. Provide facilities commensurate with the use level associated with this management area (parking for 10 to 40 vehicles).
4. Provide and maintain signs for public safety as follows:
 - a. Use standard Forest Service trailways, trail posts, and rock cairns. Signs are to be natural appearing wood with routed letters.
 - b. All trail junctions and trailheads will be signed without destination distances indicated. Phase out existing non-conforming signs.

PROTECTION

Same as Prescription 8_a

VEGETATION AND
DIVERSITY MANAGEMENT

Same as Prescription 8_a

STANDARDS AND GUIDELINES

Construct and maintain trails to a level three. Maintain trails in accordance to standards in Trail Handbook (FSH 7709.12).

PREScription FOR MANAGEMENT AREA K

This prescription provides for maintaining the qualities of an area that make it suitable for inclusion in the National Wilderness Preservation System. It applies to areas designated by Congress under Public Law 96-560 for study area review. Congress makes the final decision on wilderness designation, but until such time, the areas will be administered so as to maintain their presently existing wilderness character and potential for inclusion. Exceptions are:

That with respect to the grazing of livestock and oil, gas and mineral exploration and development activities, study areas will be administered according to laws applicable to the National Forest System. This prescription can be applied on the following Wilderness Study Areas: West Needles (15,800 acres), Piedra (41,500 acres), and South San Juan Expansion (32,800 acres).

MANAGEMENT ACTIVITY

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Undertake no long-term management of cultural resource properties for general public use or interpretation. Allow use of identified cultural resource properties for religious, other socio/cultural or research purposes only when such use will not degrade wilderness values.

Visual Resource Management (A03, A04)

Manage areas for a visual quality objective of "Retention" of existing landscapes, consistent with requirements of Public Law 96-560. Design all activities so impacts of man are not apparent.

Dispersed Recreation (A14, A15)

Allow recreation activities that will retain the areas suitability for wilderness classification.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)
2. Use areas managed under this prescription to alleviate use pressure on existing wildernesses. Inform the public on recreation opportunities available and minimal impact use procedures.
3. Monitor recreation use (people & stock) to prevent unacceptable degradation practices.

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITY

GENERAL DIRECTION

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Allow indigenous species to maintain their natural balance with habitat, each other, and man.

1. Manage river otter habitat along the Piedra River extending into the Wilderness Study Area under the joint agreement with the Colorado Division of Wildlife.
2. Allow changes in habitat diversity via natural succession.
3. Allow aerial stocking. Stock species that are indigenous to the area or those already established by prior stocking.
4. Retain predatory animals as a viable component of forest fauna. Control problem animals only; use no chemicals.

RANGE

Range Resource Management (D02)

Continue domestic livestock grazing with the intent to utilize available forage and maintain forage vigor.

1. Allow historical motorized use for range purposes to continue.
2. Control noxious weeds and cooperate with other government agencies in control efforts.

Range Forage Improvement (D03)

Do not use range cultural practices such as vegetation manipulation to improve forage composition or production.

Range Structural Improvements (D05) and Maintenance (D06)

Limit investments in structural range improvements to those that improve distribution. Emphasize primitive, natural material for water developments and range structures.

TIMBER

Maintain timber and other vegetation in their natural condition. Allow no vegetation manipulation.

WATER

Water Resource Improvement (F05)

Maintain watersheds in their natural condition. Limit use in unstable or degraded areas.

MANAGEMENT ACTIVITY

MINERALS AND GEOLOGY

Mining Law Compliance
and Administration
(G01)

Minerals Management -
Leasables

GENERAL DIRECTION

Administer and mitigate all mineral related activities so that they will have the least lasting impact and effect on wilderness resources and values. Authorize mechanical equipment access on a case-by-case basis. Permit road construction only if use would be allowed under existing laws or regulations.

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 40 percent;
 - b. High erosion hazard;
 - c. High geologic hazard;
 - d. Low visual absorption capacity.
4. Lands leasable under the above conditions which would result in "islands" because access, etc., would be necessary across land which could not be restored as near as practical to natural conditions.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include the following stipulations in all leases:

1. BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture."
2. Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation."

MANAGEMENT ACTIVITY

GENERAL DIRECTION

STANDARDS AND GUIDELINES

3. Forest Service (R-2) Supplement R (for oil, gas and geothermal) or Supplement S (for other leasables) to Form 3109-3, "Wilderness Stipulations."

Require Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation," when high levels of mineral activity are proposed in environmentally sensitive areas.

Recognize threats to wilderness values from actions proposed on adjacent or included private lands.

Subject to prior rights, limit activities to those compatible with purpose and intent of wilderness.

Maintain soils in their natural conditions. Limit use in unstable or degraded areas.

Allow motorized recreation use where it does not reduce wilderness potential.

1. Allow motorized use and road construction where PL 96-560 allows in mining and grazing activities.
2. Defer trail construction until Congress makes the final decision on wilderness designation. Limit reconstruction to projects necessary for public safety.

Protect the qualities of the area that make it suitable for possible inclusion in the National Wilderness Preservation System during fire suppression.

1. Use bulldozers or other wheeled or tracked motorized equipment only when there is imminent threat to human life, developed property or resources outside the area.
2. Locate base fire camps outside the area if feasible.

Allow diversity to change through natural succession. No specific vegetation management is planned.

LANDS

Land Exchange and Acquisition (J13, J15)

Special Use Management (J01)

SOILS

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Trail Construction/Reconstruction and Trail System Management (L22, L23)

PROTECTION

Fire Suppression (P08, P09)

VEGETATION MANAGEMENT AND DIVERSITY

Maintain existing trails at maintenance level two.

PRESCRIPTION FOR MANAGEMENT AREA L₂

This prescription is designed to protect and preserve prehistoric ruins and peregrine falcon habitat located within Chimney Rock Archaeological Area. Management will emphasize increasing recreational visitor use and enjoyment to the extent that it does not conflict with the primary values of the Area.

Close coordination will be established with the Southern Ute Tribe in maintaining and increasing existing developments and uses. Other resource and land management activities will be constrained to avoid conflict with preservation and protection objectives. Investment for resources other than cultural, recreation and wildlife will not be made.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource
Management (A02)

GENERAL DIRECTION

STANDARDS, AND GUIDELINES

Manage cultural resources for protection, preservation, investigation, and a relatively high degree of public use.

1. Maintain the reconstructed ruins to present standards; new sites will be excavated and reconstructed as necessary to facilitate interpretive plans and increase in public use.
2. Allow supervised public visitation to occur on a regular scheduled basis; however, close the Chimney Rock cuesta (1350 acres) to unsupervised public entry to protect the cultural resources.
3. Provide an observation tower and appropriate Visitor Information Service programs for interpretation of the unique archaeological resources. The public information program could include, but is not limited to, programs on the cultural importance of the area as well as efforts to further the survival of the peregrine falcon.
4. Issue antiquities permits compatible with area objectives to qualified academic institutions, individuals, and other organizations for study and research.
5. Curate and display significant artifacts found in the area either on site or at other suitable facilities.
6. Inform the public about the cultural resources found in the area.

Visual Resource
Management (A03, A04)

Within the Chimney Rock Archaeological Area, meet the visual quality objective of "Retention." In the middle ground areas seen from the cuesta, meet the visual quality objective of "Partial Retention." Within areas along Highway #160 where visual modifications exist, short-term objectives of "Enhancement" or "Rehabilitation" may be applied where opportunities exist.

MANAGEMENT ACTIVITIES

Recreation or VIS Site
Construction and
Rehabilitation (A05,A06)

Visitor Information
Services (A08,A09)

Dispersed Recreation
(A14, A15)

Recreation Management
(A16)

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

GENERAL DIRECTION

Construct developments for public convenience and to accommodate increased use.

1. Make the area available for day use activities such as viewing the ruins, observing wildlife, hunting, and hiking.
2. Construct public convenience facilities, including, but not limited to, restrooms in the observation area, an observation tower, self-guided interpretive trails, and an environmental education-interpretive area.

Permit only special land uses directly serving public visitation and interpretation of the ruins.

Protect and maintain peregrine falcon habitat within the Chimney Rock Archaeological Area; perpetuate continued utilization of that habitat.

1. Undertake population reduction programs for any species of wildlife that increases in number to a point of being detrimental to the peregrine falcon habitat.
2. Undertake projects which improve habitat of small song-birds to increase their numbers as prey for the peregrine falcon.
3. Cooperate with the Colorado Division of Wildlife under the Memorandum of Understanding #130051 to maintain the peregrine falcon and improve habitat at the Chimney Rock site.
4. Inform the public about the peregrine falcon.
5. Limit public visitation during periods when peregrine falcons are nesting and rearing.
6. Allow no vegetation modification projects that would degrade the habitat of the peregrine falcon.
7. Projects may be undertaken to improve or modify wildlife habitat if such projects do not conflict with peregrine falcon habitat management.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

RANGE

Range Resource
Planning and
Inventory (D01)

Permit no livestock grazing except the use and grazing of recreation horses.

TIMBER

Timber Resource
Management Planning
and Inventories (E00)

Allow tree removal only when removal enhances cultural, wildlife or recreation values or improves safety. Capable forest land is not suitable for timber production and is placed in the "reserved" component.

Fell trees only for such purposes as public safety, improvement of aesthetics, insect and disease control, ruins research and maintenance, ruins reconstruction, or wildlife habitat improvement.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance
and Administration
(G01)

Maintain current withdrawal from mineral entry on 1,350 acres centered on the Chimney Rock cuesta (withdrawn 4/30/70 under authority of E.O. 10355). Pursue withdrawal of the remaining 1,810 acres of the designated Chimney Rock Archaeological Area. In the event withdrawal is not made, supervise the activities of claimants to insure minimum impacts on cultural and wildlife resources.

Minerals Management -
Leasables

Recommend against or deny consent to BLM for issuance of leases or portions of leases within areas to which this prescription applies.

An exception to the above is where surface use or occupancy can be permitted immediately adjacent to the boundary of the area to which this prescription applies. For these situations, recommend for leasing the area within one-half mile inside the boundary subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to those areas. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

PRESCRIPTION FOR MANAGEMENT AREA L₂ (Continued)

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

LANDS

Special Use Management (J01)

Permit only special land uses directly serving public visitation and interpretation of the ruins.

Property Boundary Location (J06)

Survey, mark and post the boundary of the Chimney Rock Archaeological Area.

Land Exchange and Acquisition (J13,J15)

Actively pursue acquisition of adjacent or nearby lands essential for protection of significant archaeological values and for an interpretive program that provides a well-rounded understanding of the Chimney Rock occupation.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Restrict public use to designated trails and access roads unless otherwise authorized by the Forest Supervisor.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. Close the Chimney Rock Area to all off-road vehicular travel except those used for maintenance, emergencies, administrative use, and guided tours, or as otherwise authorized by the San Juan National Forest Supervisor.

2. Construct short interpretive trails.

3. Construct a loop horse and foot trail to allow for public trail use between the main gate and the parking lot.

PROTECTION

Fire Suppression (P08, P09)

Assure the protection of cultural, recreational, wildlife, and visual values. Protect the area from disease, insect, and fire outbreaks that threaten the integrity of the area.

Treatment of Activity and Natural Fuels (P11, P12)

1. Permit the use of dozers in fire suppression only after consultation with an archaeologist.

Law Enforcement (P24)

2. Prescribed burn for hazard reduction when archaeological, wildlife, and recreational resources are not endangered.

Insect and Disease Management-Suppression (P35)

3. Suppress all fires posing a danger to visitor and personnel safety, archaeological ruins, peregrine falcon habitat, and developed facilities.

Take suppression actions necessary to control wildfires at ten acres or less on 90 percent of the days during the regular fire season.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

4. Closely monitor ruins for deterioration and law violations. Increase law enforcement patrols during periods of public access.

VEGETATION MANAGEMENT
AND DIVERSITY

No specific vegetation management is planned except as necessary for insect and disease control or to meet cultural, recreation, wildlife, or safety objectives.

STANDARDS AND GUIDELINES

PRESCRIPTION FOR MANAGEMENT AREA M

This prescription is designed to maintain or enhance aquatic and riparian ecosystems and to provide direction for riparian area management.

Emphasis is upon improvement in water quality, fisheries and wildlife habitat, visual quality, and public health and safety. Other resource uses will occur to the extent they are compatible with, or enhance, riparian and aquatic resources and do not conflict with floodplain management. Timber production will not be considered a management objective. Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Livestock grazing will be allowed; however, in specific areas the overall number or season of use may be reduced. Recreation user density will be dispersed to the maximum extent.

This prescription will be applied on all aquatic and riparian ecosystems on the Forest. Riparian ecosystems are composed of the riparian zones adjacent to perennial streams, lakes and reservoirs and including other well developed riparian vegetation (primarily intermittent streams). These ecosystems are specifically delineated by the transition between the aquatic ecosystem and adjacent terrestrial ecosystems and are identified by soil characteristics and distinctive vegetation communities that require free and unbound water.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with riparian and aquatic values. Limit interpretation to low cost developments such as interpretive signing.

Visual Resource Management (A03, A04)

Provide forest users with a visually appealing landscape. Meet the visual quality objective of "Partial Retention" within the foreground zone of riparian areas unless the adjacent terrestrial prescription requires a more restrictive visual quality objective. Identify potential enhancement opportunities and develop these on a priority basis.

1. Initiate rehabilitation measures for activities that do not meet adopted visual quality objectives.

2. Maintain or enhance natural appearing forested landscape through the emphasis of old growth ponderosa pine, hardwood stands, spruce-fir, and understory shrub and grass vegetation.

3. Enhance viewing opportunities by small selected openings or thinnings in dense, heavily timbered riparian areas and by increasing vegetation diversity.

Developed Recreation Sites (A11, A13)

Evaluate existing campgrounds for flood hazard and relocate if necessary. Discourage additional construction in this zone.

GENERAL DIRECTION

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

Monitor sanitation facilities for campgrounds located in or adjacent to streams to ensure effectiveness in keeping pollutants out of the streams.

Dispersed Recreation
(A14, A15)

Allow only those uses compatible with protection of riparian ecosystems.

1. Discourage camping in areas of concentrated use.

2. Prohibit off-road vehicle use within riparian areas except at designated right angle crossings.

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

Provide habitat diversity in conjunction with other resource activities.

1. Manage vegetation to maintain viable populations of all existing species, consistent with site characteristics of each riparian zone and maximum structural diversity within each vegetation type.
2. Manipulate vegetation for improvement of wildlife and fish habitat and improvement of habitat diversity.

Manage riparian areas identified as essential habitat for threatened and endangered species by retaining these habitats in a condition suitable for occupancy.

Bald Eagle:

Retain perch and roost tree areas.

River Otter:

Manage river otter habitat under guidelines and trapping regulations jointly agreed to between San Juan National Forest and Colorado Division of Wildlife.

Bald Eagle:

Restrict human activities in areas of essential habitat during the period of November 15 through March 30.

River Otter:

Cooperate with the Colorado Division of Wildlife to enforce trap-size restriction on appropriate portions of the Piedra River and its tributaries until a density of one otter per five miles of stream is reached.

STANDARDS AND GUIDELINES

Prohibit camping within 100 feet of stream and water bodies in areas where concentrated camping reduces ground cover to less than buffer strip requirements (See the Water section in this prescription for buffer strip standards and guidelines), or is causing water pollution.

MANAGEMENT ACTIVITIES

PRESCRIPTION FOR MANAGEMENT AREA M (Continued)

GENERAL DIRECTION

STANDARDS AND GUIDELINES

Manage riparian areas identified as essential habitat for indicator species by retaining suitable habitats.

Beaver:

Cooperate with the Colorado Division of Wildlife in the introduction and control of beaver populations into suitable degraded riparian/aquatic areas where such actions would be beneficial to riparian management.

Cutthroat, Rainbow, Brown, and Brook Trout:

Implement structural and non-structural improvements to maintain or improve fisheries habitat in aquatic ecosystems. Examples of structural improvements that may be used include log dams, gabions, boulder replacement cover placement, trash or barrier removal or deflection. Examples of non-structural improvements include stocking and water quality treatments.

RANGE

Range Resource
Management (D02)

Range Forage
Improvement (D03)

Range Structural
Improvements (D05)
and Maintenance (D06)

Emphasize special management in riparian areas concentrating on proper use and livestock distribution. Domestic livestock will be allowed to graze within riparian areas; however, where grazing has degraded these ecosystems, site specific management programs will be initiated to correct the problems.

1. Riparian areas with grazing will meet filter strip-ground cover standards and streambank stability standards.
 2. Where ground cover standards are not met or other riparian ecosystem degradation is occurring from grazing:
 - a. Implement intensive management systems (rest-rotation, deferred-rotation or rotation) which remove grazing from riparian areas at least part of the year, or;
 - b. Reduce stocking to a level that will allow degraded areas to recover, or;
 - c. Use temporary site specific exclusion fencing.
- See the Water Section of this prescription for standards and guidelines.

3. Favor utilization of non-riparian forage over riparian by:
 - a. Developing off-stream water sources.
 - b. Placement of salt blocks out of riparian areas.
4. Reduce bank trampling by:
 - a. Wing fences
 - b. Log barriers
 - c. Vegetation barriers
 - d. Hardening of livestock water point sites
5. Prohibit trailing (driving) of livestock along the length of rivers. (This does not apply to established stock driveways.)
6. Manage riparian zones of at least 200 feet in width that do not normally become firm and dry during the grazing season to avoid hummocking, retrogression to earlier successional stages, water table lowering, breaking of stream banks, and gullying.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Harvest timber to meet wildlife, visual, and other resource needs. Timber production will not be considered a primary management objective in riparian areas.

1. Apply selection systems to all coniferous species. This guideline applies to the area at least 100 feet and up to 300 feet (measured from the normal high water mark) from a stream or lake, out to the limit of riparian vegetation. This guideline is not applicable in the event of fire, insect, or disease crisis, and exceptions are allowed for visual resource management, wildlife purposes, and aspen regeneration.
2. Require removal of all slash from areas below the normal high water line.
3. Allow no landings or log decks on areas below the normal high water line.

PRESCRIPTION FOR MANAGEMENT AREA M (Continued)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

WATER

Water Resource
Improvement (F05)

Maintain sediment yield within threshold limits. The water yield and sediment yield effects of vegetation manipulation and construction projects will be determined through the HYSED model to determine sediment threshold limits and mitigation measures.

Maintain protective buffer-filter strips around water bodies and stream channels. Manage ground cover in buffer strips to protect water quality.

1. Treat disturbed areas resulting from management activities, which are contributing sediment directly to perennial streams or lakes, to reduce sediment to the natural rate in the shortest possible time.
2. Limit use of herbicides, insecticides, rodenticides, or other chemical agents in management activities to times and places where possible transport to or by surface water is minimal. Follow all label requirements concerning water quality protection.
3. Use channelization of natural streams for flood control or other purposes only as a last alternative. Where channelization is used:
 - a. Minimize changes in hydraulic gradient, channel length and channel width.
 - b. Excavate new channel sections in low water to minimize sedimentation.

4. Protect riparian areas from type conversion projects unless the project is specifically for the protection and/or enhancement of those areas as wildlife or fisheries habitat, aesthetics, or safety.
5. Stabilize streambanks which are damaged beyond natural recovery in a reasonable time period with loose rock, rock and wire, logs, gabions, or other restoration structures.

Locate proposed critical facilities (roads, . campgrounds, buildings) outside floodplain boundaries for the 100-year flood (Executive Order 11988) unless no practicable alternative location exists. Where present and future facilities cannot be located out of the 100-year floodplain, use structural mitigation (deflection structures, riprap. etc.).

1. Maintain at least 80 percent of expected natural ground cover with minimal soil and streambank disturbance on each acre within the following distances from streams in riparian areas:

BUFFER-FILTER STRIPS

Gradient % of side slope	Width* from stream bank in feet
0	100**
10	100
20	130
30	170
40	210
50	250
60	290
70	330
80+	370

*Developed from Technical Note #10 SCS

**The 100 feet minimum is established by the NFMA planning regulations.

2. Maintain at least 80 percent of expected natural ground cover in a minimum buffer-filter strip of one hundred feet to include riparian vegetation around all lakes and reservoirs, excluding stock tanks.
3. Do not reduce stream channel stability, due to management activity, by greater than ten points from expected natural stability, using methods and criteria established by Plankuch (1975), and Cooper (1978). Under no conditions will the total score be raised above "95" by management activities (higher score = less stability).

Maintain minimum stream flows for fish, wildlife, livestock, recreation, aesthetics and channel maintenance purposes.

1. Maintain sufficient stream flow to sustain fish in the riffle sections of streams. This is generally about 30 percent of the October-March natural stream flow and 50 percent of the April - September stream flow.
2. Ensure instream flows for Forest activities in water adjudication proceedings.
3. Protect water right applications of others which will de-water streams below acceptable flows.
4. Secure and protect instream flows through special use permit provisions, water use of others' stipulations, and State water rights.

MINERALS AND GEOLOGY

Mining Law Compliance
and Administration
(G01)

Require timely and effective rehabilitation of lands disturbed in riparian zones by mineral activities.

1. Do not allow soil material from drill or process site preparation to be deposited in natural drainageways. The lower edge of disturbed or deposited soil banks should be above the high water marks in the drainage-way. Require construction of berms or dikes as necessary to prevent sedimentation of streams.
2. Mineral removal should be away from the water's edge or outside the wetland-riparian zone if possible. Once extracted, mineral processing activities should be away from the water's edge.
3. Require the design and construction of placer mine settling ponds to allow for high water flows to prevent washouts from seasonal flooding. Require construction of berms or dikes as necessary to prevent sedimentation of streams.
4. Require the sealing and diking around drilling mud pits to prevent leakage into streams or other water sources, as a means of protecting aquatic habitat.
5. Maintain and enhance visual appearance and fish and wildlife habitat when rehabilitation opportunities occur.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

6. Drain and revegetate roads after mineral use is discontinued to reduce soil erosion and maintain water quality and watershed conditions.

Minerals Management -
Leasables

Recommend for or consent to BLM for issuance of leases or portions of leases within areas to which this prescription applies. Include the following stipulations in all leases.

1. BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture."
2. Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulation."
3. Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation."

LANDS

Land Exchange and
Acquisition (J13, J15)

Protect riparian and floodplain values in all land exchanges.

1. Make a flood hazard analysis and evaluation prior to the acquisition or exchange of land within floodplains.
2. Approximately equalize the amount and quality of riparian areas and floodplains in the exchange of offered and selected tracts. Where the disposed lands have more floodplains, use protective stipulations to insure maintenance of floodplain values.

Special Use
Management
(Non-recreation) (J01)

Do not authorize new land uses in riparian areas unless there is a demonstrated public need or benefit, and only after a flood hazard analysis and evaluation has been made. Evaluate existing special uses at the time of renewal to see if they meet objectives of this prescription.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Continue the adjoining road standards for transportation/travel management through riparian zones when feasible. Locate roads and trails outside of riparian areas unless alternative routes have been reviewed and rejected as being more environmentally damaging, involve prohibitive cost, or if such location would clearly not be in the best public interest. Where road location in riparian areas is necessary:

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS AND GUIDELINES

1. Do not parallel streams except where absolutely necessary.
2. Minimize clearing and ground disturbance at stream crossings.
3. Locate crossing at points of low bank slope and firm surfaces.

Design roads and crossings in construction and reconstruction to minimize impacts on riparian zones.

1. Construct and maintain roads to keep sediment out of riparian and aquatic habitats. Construct only to the standard necessary to achieve multiple use goals for the specific area. Clearing width and vegetation clearing should be minimal.

a. Schedule construction activities during dry periods, low water periods, or during partially frozen conditions.

b. Stabilize fill around road crossings and culverts to prevent erosion by riprapping, planting, mats, etc.

c. Create artificial sediment trap buffers by installing barriers or depressions at time of construction.

2. Place culverts in a manner such that velocity (fish passage) barriers are not created. Improper placement or sizing of culverts can block the movement of aquatic species if water velocities in the installed structures increase substantially above the adjacent stream. Velocities can be maintained or reduced by increasing culvert diameter, decreasing culvert gradient, installing baffles, or by constructing a pool immediately below the culvert.

3. Limit the use of construction equipment in streams to the amount of time absolutely essential for completion of the project.

4. Establish fords only under conditions which will not cause significant streambank erosion. These conditions are where:

Establish vegetation ground cover on disturbed areas (excluding the running surface) to at least 60 percent within two years, using special measures if necessary (jute net, hydro-mulch etc.). On low productivity sites, establish to at least 40 percent ground cover.

PRESCRIPTION FOR MANAGEMENT AREA M (Continued)

STANDARDS AND GUIDELINES

GENERAL DIRECTION

- a. Stream channel and bank are bedrock, rubble or gravel.
 - b. Bank slopes are low with firm surfaces.
5. Maintain the natural width-to-depth ratio of the stream at channel crossing.

Manage roads, trails, and ORV's to prevent wildlife harassment in riparian areas and to maintain erosion at acceptable levels.

1. Make seasonal road and trail closures where needed to prevent harassment to wintering big game and bald eagles.
2. Close riparian areas to motorized vehicles operating off roads except at designated right angle crossings. This does not apply to over snow vehicles operating on snow.

PROTECTION

Fire Suppression
(P08, P09)

Treatment of Activity
and Natural Fuels
(P11, P12)

1. Accomplish fuel removal primarily by hand crews to prevent water quality degradation and to avoid disturbance from dozer-constructed fuel breaks.
2. Rehabilitate all firelines prior to demanning the fire. Include water bars and seeding.
3. Discourage location of fire camps in riparian areas. If they are, provide sanitation facilities to avoid surface or ground water pollution.

VEGETATION MANAGEMENT
AND DIVERSITY

See the Wildlife and Timber sections of this prescription for direction.

MANAGEMENT ACTIVITIES

PRESCRIPTIONS FOR MANAGEMENT AREAS N₁, N₂, N₃

These prescriptions are designed to maintain or protect rivers which have been recommended for or have potential for designation into the National Wild and Scenic Rivers System. This summary section discusses both prescriptions to point out similarities and differences. The summary is followed by management requirements (General Direction and Standards and Guidelines) for each of the prescriptions.

The San Juan National Forest contains three rivers having identified reaches recommended for addition to the National Wild and Scenic Rivers System. Management emphasis, until the United States Congress takes action, will be to protect and enhance the values for which the rivers are being recommended. Management will be constrained by Section 7(b) of the Wild and Scenic Rivers Act, management objectives for "wild," "scenic," and "recreational" river classification levels (as adopted by the United States Department of Interior (USDI) and the United States Department of Agriculture (USDA), February, 1970), and proposed management guidelines.

Prescription for Management Area N₁ will be applied on wild river segments identified for the Dolores, Piedra, and Los Pinos Rivers. Management guidelines for these segments include:

- A. Limit motorized land travel in the area to existing routes.
- B. Permit no new inharmonious habitations or improvements.
- C. Provide only primitive-type public use.
- D. Prohibit new structures and improvement of old ones if not in conformance with overall objectives.
- E. Permit fences, gauging stations, and other management facilities if there is no significant adverse effect on the natural character of the area.
- F. Permit a limited range of agricultural and other resource uses.

Prescription for Management Area N₂ will be applied on scenic river segments identified for the Dolores and Piedra Rivers. Management guidelines for these segments include:

- A. Allow motorized vehicles on designated roads and trails.
- B. Permit screened public use facilities such as campgrounds, picnic areas, and other similar developed recreation sites.
- C. Permit fences, gauging stations, and other management facilities if they present no adverse effect on natural character.
- D. Permit a range of agricultural and other resource uses.

Prescription for Management Area N₃ will be applied on recreational river segments identified for the Dolores and Piedra Rivers. Management guidelines for these segments include:

- A. Provide optimum accessibility for motorized vehicles.
- B. Public use areas may be in close proximity to the river.
- C. Allow new structures for intensive recreation use.
- D. Permit a full range of agricultural and other resource uses.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource
Inventories, Evaluation,
Protection (A02; 306,
307, 308)

See Forest-wide Management Requirements.

GENERAL DIRECTION

PRESCRIPTION FOR MANAGEMENT AREA N₁ (WILD RIVER AREAS)

STANDARDS AND GUIDELINES

GENERAL DIRECTION

Allow low-intensity development of cultural resource properties as compatible with river designation; for example, interpretive and protective signing and stabilization of historic structures. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unsolvable conflicts with designation purposes.

Meet the visual quality objective within the corridor of "Retention" as a minimum for all activities.

Provide outdoor recreation opportunities for "Semi-Primitive Non-motorized" recreation in an unmodified setting.

Allow primitive facilities for use by boaters when needed to protect existing camping sites; otherwise, allow no new campgrounds, picnic areas, and trailheads in river corridors.

Permit investments in structural wildlife habitat projects as long as no impacts are made on the natural wild character of the corridor.

Allow domestic livestock to graze within corridors, but decrease grazing where adverse impacts on river banks and vegetation occur. Where previous grazing has degraded these ecosystems, manage livestock to correct the problems.

1. Improve distribution of livestock by:

- a. Developing off-stream water sources;
- b. Placement of salt blocks and fencing;
- c. Increased herding effort;
- d. Management systems that would remove livestock from the area periodically.

2. Exclude cattle from sensitive sites and reduce numbers or period of use in areas where grazing degradation has occurred.

MANAGEMENT ACTIVITIES

Cultural Resource Enhancement (A02; 309)

Visual Resource Management (A03, A04)

Dispersed Recreation (A14, A15)

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

RANGE

Range Resource Management (D02)

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

3. Prohibit trailing (driving) of livestock along the length of rivers. (This does not apply to established stock driveways.)

Range Forage Improvement (D03)

Limit investments of range cultural practices to broadcast seeding of native forage species and noxious weed control.

Range Structural Improvements (D05) and Maintenance (D06)

Limit investments in structural improvements to those needed for proper distribution and river area protection. Prevent bank trampling by:

1. Wing fences
2. Log barriers
3. Vegetation barriers

TIMBER

Timber Resource Management Planning and Inventories (E00)

Capable forest land is "unavailable" for timber harvest.

WATER

Water Resource Improvement (F05)

Prohibit construction of new water development facilities as set forth in Section 7(b) of the Wild and Scenic Rivers Act.

MINERALS AND GEOLOGY

Mining Laws Compliance and Administration (G01)

Proposed river corridors are currently under a temporary withdrawal from entry under the general mining laws. This withdrawal will be permanently established by law if Congress includes the rivers in the national system. Rights acquired prior to permanent withdrawal will be identified and strictly administered.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following situations occur:

1. Threatened and endangered wildlife essential habitat.
2. Threatened and endangered plant species.

GENERAL DIRECTION

3. High resource sensitivity based on:
 - a. Slopes steeper than 40 percent;
 - b. High erosion hazard;
 - c. High geologic hazard;
 - d. Low visual absorption capacity.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include the following stipulations in all leases:

1. BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture."
2. Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation."
3. Forest Service (R-2) Supplement E to Form 3109-3, "Wild and Scenic Rivers System Stipulation."

Acquire easements or fee title of private lands to protect the natural character of the area. All private land within the established river corridor boundary is subject to the scenic easement or acquisition program. Do not dispose of National Forest lands within corridor.

Allow existing special land uses to continue until permits expire. Examine uses to determine if compatible with the intent of the Wild and Scenic Rivers Act. Permit new uses only if compatible with the Act.

See Forest-wide Management Requirements.

MANAGEMENT ACTIVITIES

LANDS

Land Exchange and Acquisition (J13, J15)

Special Use Management (Non-recreation) (J01)

SOILS

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Maintain existing roads and trails in the corridor at the standard to which they were constructed.

1. Close corridors yearlong to off-road motorized vehicle use.
2. Close existing trails to motorized vehicle use.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

PROTECTION

Fire Suppression (P08, P09)

Control fires to minimize air and water pollution, and resource damage.

Do not allow tractor use within river corridors.

VEGETATION AND DIVERSITY MANAGEMENT

No diversity objectives are planned for. Natural succession will take place.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Management (A02)

Visual Resource Management (A03, A04)

Developed Recreation Sites (A11, A13); Dispersed Recreation (A14, A15)

See Prescription N₁

See Prescription N₁

Permit recreation to achieve the experience levels derived from "Semi-Primitive Motorized" activity opportunities in an essentially unmodified setting.

1. Permit existing or new developed sites such as campgrounds, picnic areas, hunter camps, fisherman parking and other trailhead facilities if they are capable of being screened from view on river banks.
2. Construct new trails to facilitate recreation use along the river.
3. Provide boater campsites on boatable segments, with basic facilities to protect the environment. These may include such facilities as primitive designed toilets and fireplaces.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Permit investments in wildlife habitat projects that do not cause adverse impact to the scenic qualities of the river corridor. Restrict habitat improvement projects that require removal of trees to corridor perimeter areas which cannot be seen from the river bank.

RANGE

See Prescription N₁

TIMBER

Timber Resource Management Planning and Inventories (E00)

Capable forest land is "not suitable" for timber production; however, timber may be salvaged without new road construction.

WATER

See Prescription N₁

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

MINERALS AND GEOLOGY

Mining Laws Compliance
and Administration (G01)

See Prescription N₁

Gravel borrow areas may be initiated when out of view from river, or where the view is blocked by intervening ridges and well-established timber stands.

Minerals Management -
Leasables

See Prescription N₁

LANDS

Land Exchange and
Acquisition (J13, J15)

See Prescription N₁

Special Use
Management
(Non-recreation J01)

Allow existing special uses to continue until permits expire. Examine uses to determine if compatible with the intent of the Wild and Scenic Rivers Act.

SOILS

See Prescription N₁

FACILITIES

Local Road Construction,
Reconstruction,
and Maintenance (L12,
L13, L19)

Manage the transportation system to enhance scenic values and provide viewer access.

1. Construct only roads needed to serve newly developed recreation sites.
2. Close areas yearlong to the use of motorized vehicles off development roads and trails except for oversnow vehicles operating on snow.
3. Maintain existing roads at the standard to which they were constructed.

PROTECTION

See Prescription N₁

VEGETATION AND
DIVERSITY MANAGEMENT

See Prescription N₁

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

RECREATION

Cultural Resource Management (A02)

See Prescription N₁

Visual Resource Management (A03, A04)

Meet the visual quality objective within the corridor of "Partial Retention" as a minimum for all activities. Take advantage of topography and vegetation to screen new facilities from view.

Developed Recreation Sites (A11, A13); Dispersed Recreation (A14, A15)

Manage for "Roaded Natural Appearing" recreational opportunities in a generally unmodified setting.

1. Construct new developments such as campgrounds, picnic areas, trailheads, fisherman parking and boat launching facilities in areas buffered from the river banks.
2. Provide boater campsites, on boatable segments, with basic facilities to protect the environment. These facilities may include primitive toilets, fireplaces, and stationary tables.
3. Construct interpretive trails to interpret river values and associated environment.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Permit investments in wildlife habitat projects that do not cause adverse impact to the scenic qualities of the river corridor.

RANGE

See Prescription N₁

TIMBER

Timber Resource Management Planning and Inventories (E00)

Harvest timber only to maintain healthy stands and to enhance visual, wildlife, and other values of the corridor. Capable forest land is "not suitable" for timber production.

1. Use uneven-age systems (single tree selection and group selection) in all conifer stands. Remove no more than 30 percent of the basal in any one cutting period (30 years).

WATER

See Prescription N₁

2. Clearcut aspen in patches of one to three acres.

GENERAL DIRECTION

See Prescription N₁

See Prescription N₁

Permit special land uses that are compatible with recreational river values.

See Prescription N₁

See Prescription N₂

See Prescription N₁

See Prescription N₁

MANAGEMENT ACTIVITIES

MINERALS AND GEOLOGY

LANDS

Land Exchange and Acquisition (J13, J15)

Special Use Management (Non-recreation J01)

SOILS

FACILITIES

PROTECTION

VEGETATION DIVERSITY AND MANAGEMENT

PRESCRIPTION FOR MANAGEMENT AREA 0

This prescription emphasizes natural processes and protects natural and archaeological features to preserve examples of naturally occurring ecosystems and human interaction spheres (archaeology) in unmodified condition for research and educational purposes.

This prescription is designed to manage Research Natural Areas to provide:

- Baseline areas against which effects of human activities can be measured;
- Sites for study of natural and past human interaction processes in undisturbed ecosystems; and
- Gene pool preserves for all types of organisms, especially rare and endangered species as well as representative samples of forest and grassland types.

Resource and land management activities that do not serve these purposes will be severely constrained.

MANAGEMENT ACTIVITIES

RESEARCH AND EDUCATION

GENERAL DIRECTION

Encourage use for research and specific educational projects by qualified scientists, educators and organizations.

1. Permit only research and educational projects through cooperative agreement between the proponent and the Station Director of the Rocky Mountain Forest and Range Experiment Station.
2. Allow collection of endangered, threatened, or rare plants only after requirements of the Forest Service Herbarium are met.

STANDARDS AND GUIDELINES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Allow use of the area for research and educational purposes.

1. Ensure that research conducted on archaeological properties is compatible with the intent of Research Natural Area designation. Non-destructive research techniques will be preferred. Research can only be conducted by, or under the direct supervision of, professional level archaeologists or related academic disciplines, and such research will only be completed under a Forest Service and State Historic Preservation Office approved research plan/design.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

2. Use data salvage type mitigation only as a last alternative to preserve resources that cannot in any feasible way be protected in their field situations, due to uncontrollable natural or human factors.
3. Allow and promote the use of suitable archaeological properties for public education purposes, as long as such use does not degrade designation quality.
4. Prohibit uses of archaeological properties other than for research or public education.

Visual Resource Management (A03, A04)

All research and educational project improvements will meet the visual quality objective of "Retention." Manage the general area under the visual quality objective of "preservation."

Dispersed Recreation (A14, A15)

Manage recreation resource to provide "Semi-Primitive Non-motorized" recreation opportunities. Close the area to public use if overuse contributes to modification of the unique character of the areas.

WILDLIFE

Non-structural and Structural Wildlife Habitat Improvement (C03, C06)

Limit wildlife management activities to maintain the area for research of natural plant and animal succession. Do not undertake any projects to improve or otherwise modify habitat for any species of wildlife.

1. Allow hunting, fishing, and trapping under regulations set forth by the State of Colorado. Do not encourage any of these.

2. Implement population reduction programs to be approved by the Experiment Station Director with concurrence of the Forest Supervisor if any species of wildlife increases in number to a point of being detrimental to perpetuation of the vegetation of the areas.

RANGE

Range Resource Management (D02)

Close area to grazing except as necessary to maintain specific vegetation types. Do not develop livestock distribution and control structures except boundary fences when there is grazing in adjacent areas.

Range Structural Improvements (D05)

PRESCRIPTION FOR MANAGEMENT AREA 0 (Continued)

STANDARDS AND GUIDELINES

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

TIMBER

Timber Resource Management Planning and Inventories (E00)

Capable forest land is classified as "reserved." Harvesting of trees is not permitted unless part of research or education projects approved by the Station Director with concurrence of the Forest Supervisor.

WATER

Water Resources Improvement (F05)

Water Resources will remain subject to natural processes only.

Limit the construction of water developments to the minimal research facilities needed to measure quality, quantity, and other hydrological characteristics.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

Evaluate the desirability of withdrawing the area from mineral entry under the 1872 Mining Laws. In the event that withdrawal is not made, supervise activities of claimants to insure minimum impact on Research Natural Area purposes.

Minerals Management - Leasables

Recommend against or deny consent to BLM for issuance of leases or portions of leases within areas to which this prescription applies.

An exception to the above is where surface use or occupancy can be permitted immediately adjacent to the boundary of the area to which this prescription applies. For these situations, recommend for leasing the area within one-half mile inside the boundary subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to those areas. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange (J13)
Land Acquisition (J15)

Pursue acquisition of alienated lands that occur in areas identified as potential Research Natural Areas.

MANAGEMENT ACTIVITIES

Special Use Management (Non-Recreation) (J01)

Issue no special use permits for any purpose except those needed to further research projects approved by the Experiment Station Director with concurrence of the Forest Supervisor.

SOILS

Soil Resource Planning (K03)

Soil resources will be subject to natural processes only.

Small scale soil erosion projects may be incorporated into the design of research projects approved by the Station Director with concurrence of the Forest Supervisor.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Restrict transportation and travel management to those activities serving the purposes of Research Natural Areas.

1. Close the areas to all off-road vehicles.

2. Construct no roads through the areas.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

3. Construct trails when needed for research and educational projects approved by the Station Director with concurrence of the Forest Supervisor.

PROTECTION

Fire Suppression (P08, P09)

Allow fire and insect and disease outbreaks as part of the natural processes that Research Natural Areas preserve.

Treatment of Activity and Natural Fuels (P11, P12)

1. Allow lightning fires to burn under prescription unless they threaten either persons or property outside the area or the uniqueness of the Research Natural Area.

Insect and Disease Management-Suppression (P35)

2. Undertake only prescribed burning and fire hazard reduction projects that are incorporated into a research project approved by the Station Director with concurrence of the Forest Supervisor.

3. Protect against disease infestation from surrounding areas.

VEGETATION MANAGEMENT AND DIVERSITY

Vegetation types will be allowed to grow naturally with no planned manipulation. Diversity will be that present with natural succession.

PRESCRIPTION FOR MANAGEMENT AREA Q

This prescription is designed to provide a range of developed recreation opportunities on developed recreation sites in the public sector and on recreation residence sites.

This will be accomplished by providing developed sites, such as campgrounds, picnic areas, boating sites, trailheads, rest stops and interpretive sites, and recreation residence sites. Developed recreation capacity will be increased in selected areas, resulting in an increase in developed and dispersed recreation visitor days. Decreases in non-recreation outputs will occur. Limited investments will be made for other resource uses and outputs only if they enhance or are compatible with high recreation and scenic values.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation, Protection (A02; 306, 307, 308)

See Forest-wide Management Requirements.

Cultural Resource Enhancement (A02; 309)

Develop suitable cultural resource properties for public enjoyment through such practices as interpretive signing, stabilization, self-guided trails, etc. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unresolvable conflicts with recreational purposes.

Visual Resource Management (A03, A04)

Preserve inherent scenic values, enhance viewing opportunities, and increase variety where appropriate. Meet the visual quality objective of "Retention" or "Partial Retention" within the developed site. (See the Timber Section for additional direction.)

Dispersed Recreation (A14, A15)

Provide facilities to emphasize dispersed recreation opportunities at suitable locations. Provide parking areas, turnouts and trailheads with such facilities as toilets, information signs and stock unloading areas.

Developed Recreation (A11, A13)

Manage for "Rural" recreation opportunities as the primary recreation activity. Maintain or increase developed recreation capacity to meet demonstrated needs. Provide and maintain rustic recreation facilities (access roads, parking, structures, etc.) to allow a diversity of recreational experience levels.

1. Manage and protect areas selected for future recreation development by application of appropriate practices so as to preserve options for development.

GENERAL DIRECTION

STANDARDS, AND GUIDELINES

GENERAL DIRECTION

2. Where development sites create competition detrimental to the private sector, consider a concession permit or an alternate location for site.
3. Provide facilities for the handicapped at suitable locations.
4. Use manned and self-guided VIS facilities at suitable locations and programs to give visitors information on National Forest activities and management.
5. Allow construction or maintenance of facilities by private contractor when beneficial to the public.

WILDLIFE

Non-structural and
Structural Wildlife
Habitat Improvement
(C03, C06)

Accomplish changes in habitat diversity through visual resource management. Strive to provide:

1. Frequent wildlife sightings;
2. Diversity of vegetation cover;
3. Wildlife trees.

RANGE

Do not permit livestock to graze within developed recreation sites.

TIMBER

Timber Resource
Management Planning
and Inventories (E00)

Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Manage trees or groups of trees, rather than stands, to enhance the appearance of the site, and to ensure public safety. Maintain vegetation screening through planting, thinning and irrigation. In all timber types, remove hazardous trees if determined to be a threat to visitors.

1. Ponderosa Pine Type: Develop open park-like groups by growing trees at 50 square feet of basal area/acre growing stock level, planting ground cover or grass understory, and maintaining the group until it becomes decadent (about 300 years).

2. Aspen Type: Maintain the aspen community except on sites that are naturally converting to conifers. As pure aspen stands become decadent, clearcut the stand in staged patches and allow natural regeneration to aspen. Introduce conifers by planting for variety and longer lived species.
3. Spruce-fir and Mixed Conifer: Maintain a healthy stand condition by removing mature decadent conifers. Do not harvest trees until they approach decadence or pathological maturity (300 years on the average). Do not thin except for visual resource enhancement objectives.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance
and Administration
(G01)

Control mineral activity, within legal limits, to the extent that it does not conflict with the provision of high scenic and recreational values.

1. Initiate mineral withdrawal as needed on new recreation developments.
2. Schedule activities to minimize conflicts between mineral and recreation use.
3. Maintain the rights of ingress and egress to meet mineral operators' needs, while protecting other resource values.
4. Ensure that site rehabilitation activities follow approved operating plans, and address the established visual quality objectives. Ensure that productive capability is returned to a level equal to or greater than that prior to exploration or mining.

Minerals Management -
Leasables

Recommend against or deny consent to BLM for issuance of leases or portions of leases within areas to which this prescription applies.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

An exception to the above is where surface use or occupancy can be permitted immediately adjacent to the boundary of the area to which this prescription applies. For these situations, recommend for leasing the area within one-half mile inside the boundary subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulations," will apply to those areas. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

Land Exchange and Acquisition (J13, J15)

Acquire lands or interest in lands when developed recreation opportunities are enhanced.

Special Use Management (J01)

Special land uses will be considered on a case-by-case basis, but will generally only be approved when they enhance developed recreation opportunities.

1. Prohibit location of utilities and other improvements within developed recreation sites unless they can be located in such a way (e.g., buried lines) that will not detract from scenic values.
2. Study existing special land use permits to determine recreation potential upon termination of the permit. Assess recreation residence permits to determine if permit area is needed for other public uses.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Close developed sites to motorized vehicle use off system roads and trails.

1. Take measures to abate dust on high use roads.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

2. Construct and manage roads and trails to accommodate high constant, uninterrupted use. Maintain roads to maintenance levels four or five, depending on the experience level provided at individual developed sites.

3. Manage the area for a high density of system roads (actual road density will be determined on a case-by-case basis.)

PREScription FOR MANAGEMENT AREA Q (Continued)

MANAGEMENT ACTIVITIES

PROTECTION

Fire Suppression
(P08, P09)

Treatment of Activity
and Natural Fuels
(P11, P12)

Insect and Disease
Management-Suppression
(P35)

GENERAL DIRECTION

Modify techniques used in fuel treatment, presuppression, suppression, and insect and disease control activities to achieve recreation and visual quality objectives.

1. Use prescribed fire to retain or create areas suitable for recreation use, as well as to create desirable visual characteristics through slash disposal and species manipulation.

2. Fire suppression and control techniques shall be sensitive to visual quality objectives.

3. Aggressively control insects and diseases.

VEGETATION MANAGEMENT
AND DIVERSITY

Manage vegetation types to achieve the desired visual resource and developed recreation objectives. (See the Timber Section of this prescription for additional direction.)

STANDARDS AND GUIDELINES

1. Take suppression actions necessary to control wildfires at 10 acres or less on 95 percent of the days during the regular fire season.

2. Treat fuels on areas where wildfire can threaten lives or property so the fireline intensity on the area will not exceed 100 BTU's/second/feet on 90 percent of the days during the regular fire season.

PRESCRIPTION FOR MANAGEMENT AREA R

This prescription is designed to utilize available livestock forage, provide for low density dispersed recreation opportunities and to maintain wildlife habitat.

Emphasis is on providing a mix of resource outputs with very low investments. Livestock management will be of low intensity to utilize available forage and maintain forage vigor. Sustained non-declining timber yield is not planned; however, timber may be harvested for insect and disease control and salvage. Dispersed non-motorized recreation opportunities will be the primary emphasis although motorized opportunities will be provided in areas where resource damage will not result or where motorized use will not detract from important wildlife habitat. System roads will be managed for a low density.

MANAGEMENT ACTIVITIES

RECREATION

Cultural Resource Inventories, Evaluation Protection (A02; 306, 307, 308)

Cultural Resource Enhancement (A02; 309)

Visual Resource Management (A03, A04)

Dispersed Recreation (A14, A15)

GENERAL DIRECTION

STANDARDS, AND GUIDELINES

See Forest-wide Management Requirements.

Encourage non-recreation use (research, etc.) of suitable cultural resource properties. Do not develop cultural resource properties for general public use or interpretation.

Meet the visual quality objective of "Modification" as a minimum in all areas. In foreground areas viewed from relatively sensitive use areas (Sensitivity Levels One and Two), meet the visual quality objective of "Partial Retention." Allow past activities to recover to these objectives through natural succession.

Manage recreation use for either "Semi-Primitive Motorized" or "Semi-Primitive Non-Motorized" activities compatible with adjacent areas. No investments for recreation are planned.

1. Permit non-motorized recreation activities yearlong throughout the area. (Refer to management activities under "Facilities" for additional direction relating to roads and trails.)
2. Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts. Inform recreationists about any temporary limitations on recreation use.
3. Encourage firewood gathering.

PRESCRIPTION FOR MANAGEMENT AREA R (Continued)

STANDARDS AND GUIDELINES

GENERAL DIRECTION

MANAGEMENT ACTIVITIES

WILDLIFE

Maintain natural wildlife habitat for indigenous species.
No specific wildlife habitat improvement is planned.

RANGE

Range Resource Management (D02)

Manage livestock under low intensity to utilize available forage and maintain forage vigor.

Utilize 20 percent of usable forage production for livestock.

1. Manage livestock through activities such as herding, riding, salting, and livestock pest control.

2. Use simple management systems (e.g., season-long grazing) unless improved management systems, (e.g., rest-rotation, deferred-rotation) can be instituted by using pasture fences already in place.

3. Retain predatory animals as a viable component of forest fauna. Control problem animals only; use no chemicals; restrict control in or near high recreation use area.

Range Forage Improvement (D03)

Do not use range cultural practices such as planting or vegetation manipulation to improve forage production.

Range Structural Improvement (D05) and Maintenance (D06)

Utilize existing structural improvements. No investments will be made for additional structural improvements except as needed in conjunction with management of adjacent areas.

TIMBER

Timber Resource Management Planning and Inventories (E00)

Timber harvesting will be done only for insect and disease control purposes or to salvage dead or dying timber; not to achieve timber production objectives.

WATER

See Forest-wide Management Requirements.

MINERALS AND GEOLOGY

Mining Law Compliance and Administration (G01)

See Forest-wide Management Requirements.

Minerals Management - Leasables

Recommend against or deny consent to BLM for leasing when any one or more of the following conditions occur:

1. Threatened and endangered wildlife essential habitat.

GENERAL DIRECTION

2. Threatened and endangered plant species.
3. High resource sensitivity based on:
 - a. Slopes steeper than 60 percent;
 - b. High erosion hazard;
 - c. High geologic hazard.

An exception to the above is where the conditions occur within one-half mile of areas which can be leased with surface use or occupancy. For these situations, recommend for leasing subject to no surface use or occupancy. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to these areas.

Recommend for or consent to issuance of leases allowing surface disturbance for areas on which none of the above situations occur. Include standard stipulations (BLM Form 3109-3, "Stipulation For Lands Under Jurisdiction of Department of Agriculture" and Forest Service (R-2) Supplement D to Form 3109-3, "Surface Disturbance Stipulation") in all leases.

LANDS

See Forest-wide Management Requirements.

SOILS

See Forest-wide Management Requirements.

FACILITIES

Local Road Construction, Reconstruction, and Maintenance (L12, L13, L19)

Utilize the existing transportation system for motorized recreation activities and range resource management. Construct additional facilities only as needed for access and management of adjacent areas.

Trail Construction/Reconstruction and Trail System Management (L22, L23)

1. Allow motorized travel off development roads and trails except:
 - a. Close areas of big game winter range to snowmobiles and other motorized vehicles during winter.
 - b. Close areas where motorized travel conflicts with natural wildlife movements.

1. Maintain local constant roads to maintenance level three.
2. Maintain local intermittent roads to maintenance level two when open for project activities.
3. Maintain trails to a maintenance level two.

PRESCRIPTION FOR MANAGEMENT AREA R (Continued)

STANDARDS AND GUIDELINES

GENERAL DIRECTION

2. Manage local constant roads to accommodate medium-light, seasonal use (10-50 SADT). Regulate seasonal public use if roadbed damage will occur and where travel conflicts with natural wildlife movements.
3. Manage local intermittent roads to accommodate light use (0-20 SADT). Close to public use.

PROTECTION

See Forest-wide Management Requirements.

VEGETATION MANAGEMENT
AND DIVERSITY

No specific vegetation management is planned. Natural succession will occur.



iv. monitoring and evaluation

CHAPTER IV

MONITORING AND EVALUATION

Monitoring and evaluating the implementation of the Forest Plan provides the decisionmaker with information on the progress toward achieving the goals, objectives, and standards of the Forest Plan.

Monitoring will determine:

- if management area prescriptions are applied as directed.
- if standards are being followed.
- if the Forest Service is achieving the objectives of the Plan.
- if application of management area prescriptions are responding to public issues and management concerns.
- if effects of implementing the Forest Plan are occurring as predicted.
- if costs of implementing the Forest Plan are as predicted.
- if management practices on adjacent or intermingled non-National Forest lands are affecting the Forest Plan goals and objectives.
- the effects of implementation of the Forest Plan on other agencies.

A detailed annual monitoring action program will be prepared as part of the total San Juan National Forest annual program of work. This annual monitoring program will include the details of the amount and location of monitoring to be accomplished based on the approved program of work and funds available for monitoring. Specific locations, intensity of sampling, person days required, and costs will be identified in the annual monitoring program.

Evaluation of results of the site-specific monitoring program will be documented in an annual review. The significance of the results of the monitoring program will be analyzed by the San Juan National Forest interdisciplinary team and reviewed for action by the management team.

Based on the analysis, any need for further action is recommended to the Forest Supervisor by the management team. The recommendations can include:

- no action needed, monitoring indicates goals, objectives, and standards are achieved;
- refer recommended action to the appropriate line officer for improvement of application of management area prescriptions;
- modify the management area prescription as a Forest Plan amendment;

- modify the allocation of a management area prescription as a Forest Plan amendment;
- revise the projected schedule of outputs; or
- initiate revision of the Forest Plan.

The documented file of the Forest Supervisor's decisions resulting from monitoring and review is maintained for future use in amending or revising the Forest Plan. The evaluation report as required by 36 CFR 219.5(K)(2) will be prepared and submitted to the Regional Forester at the end of years four and nine of plan implementation. During interim years, an evaluation report will be prepared and submitted only in the case of a need to effect a plan revision, as identified by the annual reviews.

The Forest Plan's monitoring requirements appear in Table IV-1. For each activity, practice, or effect to be monitored, one or more measurement techniques and the standard to be met are specified. A frequency for measuring the monitored item is also established.

The implementation map for the Forest Plan contains the vicinity location and timing of proposed and probable management practices. The map contains ten years of projects. Each year, one year of projects will be added to the map; completed projects will be deleted from the maps and recorded in the historical file of the vegetation data base. In this way, the implementation map and schedule can be updated and revised according to the annual budgets and changes in national and regional priorities. The implementation maps are available for review at each Ranger District Office.

TABLE IV-1

Monitoring Requirements																														
Activity, Practice, Effect or Resource to be Measured										Data Sources Monitoring Techniques										Frequency of Measurements				Variability Which Would Initiate Further Evaluation						
A	C	H	I	E	V	I	N	G	O	B	J	E	C	T	I	V	E	S	O	F	F	O	R	E	S	T	P	L	A	N
Prescription application to management areas.										Data Sources: -Prescriptions -District, Supervisor's Office records -Work plans Management areas monitoring techniques: -Program reviews -General management reviews										Based on need found in re-source and activity monitoring and evaluation. Estimated, one District per year.				Any significant deviation from the prescriptions as judged by the review team.						
R E C R E A T I O N																														
Developed site use										Recreation Information Management (RIM) use and double sampling										Continuous sampling throughout use period.				Less than 10% planned use or more than 50% planned use of a site annually over a 3 year period.						
Developed site condition										RIM facility condition and routine inspections										Continuous				Facility condition below RIM condition class 2.						
Dispersed area use and experience level										RIM Use by sampling methods including road and trail traffic counters.										Continuous				When use is more than 10% ± of the Recreation Opportunity Spectrum (ROS) social setting criteria for the ROS class annually over a 3 year period						
Off-road vehicle damage										Area reviews										20% sample annually of off-road vehicle use areas				Use conflicts with management goals for management area; lowering of visual quality objective (VQO); unacceptable resource damage						
Dispersed campsite condition										Frissell site inspection.										20% sample annually of heavy use areas.				Sites in facility condition class 5 will be closed and rehabilitated.						
Trail condition										Project trail inspections										20% sample annually of Forest trail mileage.				Departure from Regional Acceptable Work Standards						

TABLE IV-1 (Continued)

Monitoring Requirements				
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation	
V I S U A L Q U A L I T Y				
Monitor compliance of visual quality objective on project or activity basis.	Field and office review of timber sales, special use permits, range improvements, and other vegetation disturbing projects	25% sample annually of District work plans.	Failure to meet intended visual quality objective of management area.	
C U L T U R A L R E S O U R C E S				
Project compliance with Forest-wide Management Requirements on ground disturbing projects.	Cultural resource professional field evaluation of 1 or 2 randomly selected projects.	Annually	Cultural resource properties being damaged/destroyed directly/indirectly by project activities.	
Protection of significant cultural resource properties.	Field condition evaluation of significant cultural resource properties; use of base year photography and records.	Biannual, during 3rd and 4th quarters of year	Cultural resource properties being damaged/destroyed by unauthorized uses and/or controllable natural agents.	
W I L D E R N E S S				
Condition of use areas.	Frissell site inspection.	10% Annually	When 20% of Frissell site inspections are found to be degraded one class from the previous year.	
Recreation wilderness use-amount and distribution.	RIM use source documents, trail registration, counters.	Annually	Regional Acceptable Work Standards, prescription management goals.	
W I L D L I F E				
Mule deer and elk productivity.	Annual harvest reports. Herd composition surveys (Forest Service and Colorado Division of Wildlife).	Annually	± 20% change in herd composition or ± 30% change in herd population.	

TABLE IV-1 (Continued)

Monitoring Requirements				W I L D L I F E (C O N T.)			
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation				
Grizzly bear occupancy	Cooperative study with Colorado Division of Wildlife	Annually	Verified sighting or confirmed evidence by sign.				
Peregrine falcon occupancy	Nest site survey and coop. study with Colo. D.O.W.	Annually	Any change in present status.				
Wildlife habitat diversity	Vegetation data base (attribute and map) by geographic area.	Annually	±10 point change in habitat diversity index score on a geographic area.				
Limited wildlife habitats maintained	District wildlife data base maps	Annually	-10% of identified areas of limited habitats.				
Deer and elk winter range capacity	Extensive browse transects, pellet group counts	10% of winter ranges annually	± 30% change in capacity.				
Wildlife diversity objectives	Prescriptions before and after project reviews	25% sample annually	20% non-compliance with stated prescription objectives, by District (20% of project areas).				
Riparian condition rating	Riparian ecosystem scorecard	6% sample	+10% change in riparian condition				
Fish habitat rating	San Juan fish habitat scorecard	Annually	+10% change in fish habitat				
				R A N G E			
Carrying capacity	Summary of range analysis carrying capacity (as updated by additional information).	20% sample of allotments annually	15% from previous Forest summary by Ranger District.				
Range condition and trend	On-the-ground analysis; Forest vegetation data base.	20% sample of allotments annually	Range condition and trend does not meet Regional and Forest Plan requirements and schedule +10%.				
Forage utilization	On-the-ground forage production/utilization determination	20% sample of allotments annually	Forage utilization of pastures or season-long allotments exceed allowable use by +10%.				

TABLE IV-1 (Continued)

Monitoring Requirements				T I M B E R	
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation		
Clearcut harvest units will not exceed maximum sizes allowed within each management area.	Silvicultural prescriptions, stand maps, sales program.	Semi-annual	Clearcut exceeds specified maximum size.		
Assure regeneration within 5 years of final harvest.	Stand examination	1st, 3rd, and 5th year sampling after harvest.	Any failure to meet standard.		
Abnormal timber mortality caused by insect, disease, fire, wind, etc., on suitable lands.	Stand examination, aerial detection survey.	Annually	10% of 10-year periodic harvest volume.		
Assure that the harvest schedule is followed.	Stand examination, silvicultural prescription, sales program.	Semi-annual	±20% for the first 5 years.		
Regenerate the reforestation backlog acres.	Stand examination, silvicultural prescription, accomplishment reports.	1st, 3rd, and 5th year sampling after planting.	-20% annually from planned program.		
Status of lands not suited for timber production.	Regeneration studies	10% Annually	If determined suited, lands will be returned to timber production.		
				W A T E R	
Potable water source compliance with State health and sanitation codes to protect public health.	Bacteriological sample in potable water sources (campgrounds, picnic grounds, administrative sites).	Monthly during use season	Violation of FSM 7420 standards.		
Compliance with Forest-wide Management Requirements of percentages of fourth-order watersheds permitted to be in a clearcut condition.	Stand examination, stand maps, watershed maps	Annually	Clearcut conditions in fourth-order watershed exceeds limitations.		

TABLE IV-1 (Continued)

Monitoring Requirements				Variability Which Would Initiate Further Evaluation	
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements			
W A T E R (C O N T I N U E D)					
Compliance with State of Colorado Water Quality Standards.	Other agency and private sector water quality data. Baseline monitoring of discharge and 10-15 water quality parameters at 20-25 permanent stations.	Baseline 1 of each 5 years - 6 times from April through Oct.		Violation of Colorado Water Quality Standards and Forest Plan Management Requirements.	
Effects of timber, range, recreation, road construction, and mining projects on water quality.	Project monitoring using above or below or paired sampling techniques. Analysis of discharge and 5-15 water quality parameters at 20-30 stations.	8-10 sampling periods 4 of each 5 years, April through Oct.		Sediment increase violating sediment threshold limits (15-35%); statistically significant water quality deterioration.	
Changes in water yield.	Acres of roads, clearcuts, powerlines, pipelines, etc., on the Forest from appropriate function records. HYSED analysis.	Annually		±25% of predicted water yield increase.	
M I N E R A L S					
Compliance with terms of operating plans	Management Attainment Report. On-site inspections.	Annually and final inspection		Effects which do not meet Forest-wide Management Requirements for soil and water	
L A N D S					
Land purchase and acquisition	Land Adjustment Plan. Management Attainment Report	Annually reviewed		±50% of planning period target.	
Land exchanges	Land Adjustment Plan. Management Attainment Report	Annually reviewed		±50% of planning period target.	
Rights-of-way acquisition	Land Adjustment Plan. Management Attainment Report	Annually reviewed		±50% of planning period target.	
Occupancy trespass	On-site inspection and land line location. Management Attainment Report.	Continuously		±25% of planning period target.	
Land line location	Survey. Management Attainment Report	Annually reviewed		±10% of planning period target.	

TABLE IV-1 (Continued)

Monitoring Requirements				
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation	
L A N D S (C O N T I N U E D)				
Special Use Permits, applications, amendments and transfers	Land Use Reports	Quarterly	±25% of Regional Acceptable Work Standards.	
Special Use Permit administration and inspection	Land Use Reports	Quarterly	±25% of Regional Acceptable Work Standards.	
Effect of management practices on adjacent or intermingled non-National Forest on Forest Plan goals and objectives.	Annual inter-agency meetings, meetings with State, County governments, grazing associations.	Continuing	Identification of significant problem in Forest Plan implementation as a result of non-Forest land management activity.	
S O I L S				
Soil survey activities	Progress reviews, Management Attainment Report	In-house once a year, inter-agency every other year.	±25% Forest Plan direction	
All ground disturbing practices that have the potential of altering the productivity of the soil, i.e., timber sales, site prep, range revegetation, roads, revegetation efforts, off-road vehicle tracks, prescribed burning.	Visual estimates, remote sensing, transects which monitor amounts and condition of ground cover, soil moisture and temperature measurements, sequential photo points, fertility and soil nutrient analysis, measurement of select bulk densities. (The above will be related specifically to individual Capability Areas and soil survey mapping units within the Capability Areas.).	10-15% of all site disturbing activities will be addressed annually	Any serious deviation from Forest-wide Management Requirements.	
F A C I L I T I E S				
Arterial/collector road construction/reconstruction	Engineering records. Management Attainment Report, on site inspection using approved project plans.	25% sample annually	Deviation from Forest Management Requirements by 20%.	

TABLE IV-1 (Continued)

Monitoring Requirements				Data Sources Monitoring Techniques		Frequency of Measurements		Variability Which Would Initiate Further Evaluation	
Activity, Practice, Effect or Resource to be Measured		F A C I L I T I E S		(C O N T I N U E D)					
Local road construction/ reconstruction		Engineering records. Management Attainment Report, on-site inspection using approved project plans.		25% sample		Deviation from Forest Management Requirements by 20%.			
	Trail construction/recon- struction	Engineering records. Management Attainment Report, on-site inspection using approved project plans.		25% sample annually		Deviation from Forest Management Requirements by 20%.			
		F I R E							
Fuel treatment program		On-site inspection with burning plan. Accomplishment report, Management Attainment Report.		10% Sample of area annually		±25% of programmed objec- tives.			
Fuel management		Fuel inventory		Annually		±20% of Regional minimum fuel treatment standards.			
Fire control objective		Individual Fire Report		100% sample annually		±10% beyond standards and guidelines			
	Meet air quality guidelines and standards for prescribed burning.	Burning plans and project reviews.		100% sample annually		±10% beyond standards and guidelines.			
		I N S E C T S		A N D		D I S E A S E			
Ensure that destructive insects and disease organisms do not increase following management activities.		Aerial surveys, ground checking		Overflight annually, ground checks as needed.		Determination that out- break is likely to exceed endemic stage.			

TABLE IV-1 (Continued)

Monitoring Requirements				
Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation	
	L A N D P R O D U C T I V I T Y			
Changes in land productivity.	Vegetation inventories and resource data.	5 year interval	Any downward changes in productivity classes.	
	S O C I A L			
Effects on Human Resource Units caused by Forest activities.	Interviews with key publics within each Human Resource Unit.	Annually	Significant change in community lifestyle.	
Success of Forest Plan implementation in resolving public issues.	Planning Action 1, media, public meetings, workshops.	Annually	Public issues should not become disruptive.	
Effects on lands managed by other agencies and on programs of other jurisdictions.	Cooperative meetings with other agencies and interviews with local government officials.	Annually	Significant conflict with goals and objectives of other agencies and publics.	
	E C O N O M I C S			
Effects on local economies based on recreation, timber, and grazing after implementation of the Plan.	District staff reviews of affected sectors.	Annually	Any serious changes in local economies.	
Actual costs of implementing Forest Plan compared to planned costs.	Comparison of Plan costs and Program Accounting and Management Attainment Reporting System (PAMARS).	Annually	±20% of planned costs.	



W. Stearns

CHAPTER V

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APPENDIX A

VEGETATION AND DIVERSITY MANAGEMENT FOR MANAGEMENT AREAS

VEGETATION AND DIVERSITY MANAGEMENT FOR MANAGEMENT AREAS

The following charts indicate the vegetation management to be used with Management Area Prescriptions contained in Chapter III. They specify the vegetation management practices to be used to obtain the range, wildlife, timber, fire and other resource objectives of the prescriptions.

Vegetation Management and Diversity Chart for Management Area A ₁									
SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				U N D E R S T O R Y M A N A G E M E N T	
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration		
Ponderosa pine	Below 30%	Above 100 or Equivalent Stocking	This prescription is not applicable for this stocking level in this type. For small inclusions, salvage existing trees when compatible with range objectives.						
	Below 30%	Between 40 & 100 or Equivalent Stocking	Manage 100% of area with understory to favor live-stock. In the long-term, convert to grass and other high forage producing plants.	Reduce the stand to 40 basal area. Salvage trees when compatible with range objectives.	None	None	None		Roller chop or brush rake, burn, disc and reseed. Burn at 10-year intervals.
	Below 30%	Below 40 or Non-stocked	Manage 100% of area for forage to favor livestock.	Salvage existing trees when compatible with range objectives.	None	None	None		Same as above.
Aspen	Above 30%	All	This prescription is not suitable for these slopes. For small inclusions of this slope class, use the same direction as below 30% slopes only if compatible with a planned project and if mechanical practice will not cause unacceptable resource damage.						
	Below 30%	All	Manage 100% of area under an 80-year rotation for forage and shade to favor live-stock.	Clearcut in blocks of 1 to 5 acres.	None	None	Natural regeneration without site preparation.		None
Interior Douglas-fir	Above 30%	All	This prescription is not suitable for this type and slope class. For small inclusions, salvage existing trees when compatible with range objectives.						
Engelmann spruce-sub- alpine fir	All	All	Same as interior Douglas-fir.						
Pinon pine juniper	Below 30%	N/A	Manage 90% of area for forage to favor live-stock. Retain 10% in pinon pine-juniper for shade and habitat diversity.	N/A	N/A	N/A	N/A		Chain, brush rake, burn, disc and reseed 10% of area managed for forage each decade.

Vegetation Management and Diversity Chart for Management Area A₁ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
	Above 30%	N/A	See ponderosa pine, slopes above 30%.					
Gambel oak	Below 30%	N/A	Manage 90% of area for forage to favor live- stock. Retain 10% in oak for shade.	N/A	N/A	N/A	N/A	Roller chop or brush rake, burn, disc and reseed. Burn at 10- year intervals.
	Above 30%	N/A	See ponderosa pine, slopes above 30%.					
Mixed browse	Below 30%	N/A	Manage 100% of area for forage to favor live- stock.	N/A	N/A	N/A	N/A	Roller chop, chain, or brush rake, burn, disc and reseed. Burn at 10-year intervals.
	Above 30%	N/A	See ponderosa pine, slopes above 30%.					
Grassland	Below 30%	N/A	Manage 100% of area for forage to favor live- stock.	N/A	N/A	N/A	N/A	Reseed to establish desirable forage species. 50% will require mechanical site preparation.
	Above 30%	N/A	See ponderosa pine, slopes above 30%.					

Vegetation Management and Diversity Chart for Management Area A₂

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 60%	Above 100 or Equivalent Stocking	This prescription is not applicable for this stocking level in this type. For small inclusions, salvage existing trees when compatible with range objectives.					
	Below 60%	Between 40 & 100 or Equivalent Stocking	Manage 100% of area with understory to favor live-stock. In the long-term, convert to grass and other high forage producing plants.	Reduce the stand to 40 basal area. Salvage trees when compatible with range objectives.	None	None	None	Burn at 10-year intervals and reseed.
	Below 60%	Below 40 or Non-stocked	Manage 100% of area for forage to favor live-stock.	Salvage existing trees when compatible with range objectives.	None	None	None	Same as above.
Aspen	Above 60%	All	This prescription is not suitable for these slopes. For small inclusions of this slope class, use the same direction as below 60% slopes only if compatible with a planned project and if practices will not cause unacceptable resource damage.					
	Below 60%	All	Manage 100% of area under an 80-year rotation for forage and shade to favor live-stock.	Clearcut in blocks of 1 to 5 acres.	None	None	Natural regeneration without site preparation.	None
Interior Douglas-fir	Above 60%	All	This prescription is not suitable for this type and slope class. For small inclusions salvage existing trees when compatible with range objectives.					
Engelmann spruce-sub- alpine fir	All	All	Same as interior Douglas-fir.					
Pinon pine juniper	Below 60%	N/A	Manage 90% of area for forage to favor live-stock. Retain 10% in pinon pine-juniper for shade.		N/A	N/A	N/A	Hand cut and burn 10% of area managed for forage each decade and reseed.

Vegetation Management and Diversity Chart for Management Area A₂ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
	Above 60%	N/A	See ponderosa pine, slopes above 30%.					
Gambel oak	Below 60%	N/A	Manage 90% of area for forage to favor live- stock. Retain 10% in oak for shade.	N/A	N/A	N/A	N/A	Burn at 10-year intervals and reseed.
	Above 60%	N/A	See ponderosa pine, slopes above 30%.					
Mixed browse	Below 60%	N/A	Manage 100% of area for forage to favor live- stock.	N/A	N/A	N/A	N/A	Burn at 10-year intervals and reseed.
	Above 60%	N/A	See ponderosa pine, slopes above 30%.					
Grassland	Below 60%	N/A	Manage 100% of area for forage to favor live- stock.	N/A	N/A	N/A	N/A	Reseed to establish desirable forage species.
	Above 60%	N/A	See ponderosa pine, slopes above 30%.					

Vegetation Management and Diversity Chart for Management Area B

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Above 40 or Stocked	Manage 30% of area to 80 GSL with oak understory to favor wildlife management indicator species; deer, elk, bear, green-tailed towhee, turkey. 120-year rotation.	2-step shelterwood on at least 80% of the area. Reduce the stand to 40 basal area at the time of shelterwood seed cut. Make re- moval cut when re- generation is estab- lished. When another harvest system is necessary due to specific site char- acteristics, use group selection below 1 acre in size.	Commercially thin at 20- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regenera- tion cut, use mechani- cal site/ preparation (brush rake and disc) with expec- tation of 50% natural regeneration and 50% planting of 1000 trees/ acre.	See other TSI. Also, protect largest di- ameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 65% of area to 80 GSL with forage understory to favor livestock. 120- year rotation.	Same as above.	Same as above.	Same as above.	Same as above.	See other TSI. Also, at first thinning mechanical site prep. and reseed.
			Manage 5% of area to high- est GSL possible up to 180 GSL to favor management in- dicator species; Abert's squirrel, hairy woodpecker, turkey. Extended rotation.	Same as above.	None	Burn at 20-year intervals start- ing at age 30.	Same as above.	See other TSI.
	Below 30%	Below 40 or Non- Stocked	Manage 30% of area for oakbrush with an approxi- mation of equal distri- bution of size classes to favor wildlife management indicator species; deer, elk, bear, green-tailed towhee, turkey.	Salvage existing trees when compat- ible with range and wildlife ob- jectives.	None	None	None	Burn at 20-year in- tervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 70% of area for forage to favor livestock.	Same as above.	None	None	None	Mechanical site prep and reseed. Burn at 10-year intervals.

Vegetation Management and Diversity Chart for Management Area B (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T					UNDERS T O R Y M A N A G E M E N T
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration		
Aspen	30-60%	All	Same as for slopes below 30% and below 40 BA.	Same as above.	None	None	None	For the 30% of the area to be managed for oakbrush, see slopes below 30% and below 40 BA.	
	Above 60%	All	This prescription is not suitable for these slopes. For small inclusions of this slope class, use the same direction as 30-60% slope only if compatible with a planned project.						
	Below 60%	All	Manage 100% under an 80- year rotation to favor wildlife management indi- cator species; deer, elk, hairy woodpecker and increased water yield.	Clearcut in blocks up to 40 acres. Clearcut entire clones.	None	None	Natural re- generation without site preparation.	None	
Interior Douglas-fir	Above 60%	All	See ponderosa pine slopes above 60%.						
	Below 60%	Below 40 or Non- Stocked	Retain in early succes- sional stage for live- stock.	Salvage existing trees when compat- ible with range & wildlife objectives.	None	None	None	Burn at 10-year intervals and reseed.	
	Below 30%	Above 40 or Stocked	Manage 10% of area in blocks greater than 100 acres to highest BA possible up to 150 BA to favor wildlife management indicator species; hairy woodpecker, mountain bluebird.	Single tree select- ion and group selec- tion with 30-year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	None	None	Natural	None	

Vegetation Management and Diversity Chart for Management Area B (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
			Manage 90% of the area to 120 GSL for timber production and increased water yield.	Clearcut 20% of the type within a watershed on 5 to 10 acre units. The clearcuts should be concentrated on lower to midslope positions in lower energy aspects (N,NE,NW). The clearcuts should be 5 to 7 tree heights in width. When the regeneration is 6' tall (40 years), clearcut an additional 20% of the type within the watershed. Thus the entire type within the watershed will be clearcut in 200 years or a 200-year rotation.	Commercially thin managed stands at 30-year intervals.	None	Natural regeneration. Burn logging debris.	None
	30-60%	Above 40 or Stocked		See the direction for slopes below 30% and BA above 40.				
	Above 60%	All		See ponderosa pine, slopes above 60%.				
Engelmann spruce-sub-alpine fir	Below 60%	Below 40 or Non-Stocked		See interior Douglas-fir slopes below 60%, BA below 40.				
	Below 30%	Above 40 or Stocked	Manage 10% of area to highest BA possible up to 180 BA to favor wildlife management indicator species; ruby-crowned kinglet and marten.	See interior Douglas-fir, slopes below 30%, BA above 40, selection cutting.				

Vegetation Management and Diversity Chart for Management Area B (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
	30-60%	Above 40 or Stocked	Manage 90% of the area to 120 GSL for timber production and increas- ed water yield.	See interior Douglas-fir, applies except that 1000 spruce trees per acre are to be planted immediately following harvest.				The same direction
	Above 60%	All	See ponderosa pine, slopes above 60%.					
Pinon pine juniper	Below 30%	N/A	Manage 100% of the area in even-age stands of up to 40 acres distributed even- ly throughout the type to favor livestock and wild- life management indicator species; deer and elk. 200-year rotation.	N/A	N/A	N/A	N/A	Chain 5% of area each decade and reseed.
	30-60%	N/A	Same as above.	N/A	N/A	N/A	N/A	Hand cut 5% of area each decade.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					
Gambel oak	Below 60%	N/A	Manage 70% of area for forage to favor livestock.	N/A	N/A	N/A	N/A	Burn at 10-year in- tervals. Mechanical site prep and reseed.
			Manage 30% of area for oak brush with an approxima- tion of equal distribution of size classes to favor wildlife management indi- cator species; deer, elk, bear and green-tailed towhee.	N/A	N/A	N/A	N/A	Burn at 10-year in- tervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					

Vegetation Management and Diversity Chart for Management Area B (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Mixed browse	Below 60%	N/A	Manage 100% of area to strive for a variety of age class distribution from young to mature to favor livestock and wild- life management indicator species; deer and elk. 100-year rotation.	N/A	N/A	N/A	N/A	Hand cut and/or prune 10% of area each decade.
			See ponderosa pine, slopes above 60%.					
Grassland	Below 30%	N/A	Manage 100% of area to retain in forage for livestock.	N/A	N/A	N/A	N/A	Reseed to estab- lish desirable forage species. 50% will require mechanical site preparation.
	30-60%	N/A	Same as above.	N/A	N/A	N/A	N/A	Reseed to estab- lish desirable forage species without mechanical site preparation.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					

Vegetation Management and Diversity Chart for Management Area D

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Above 40 or Stocked	Manage 95% of area to 100 GSL for timber production objective. Lands present- ly below 100 GSL will be managed at their highest GSL potential until seed cut then regenerated to 100 GSL.	2-step shelterwood on at least 80% of the area. Reduce the stand to 40 basal area at the time of shelter- wood seed cut. When another har- vest system is necessary due to specific site characteristics, use group selec- tion below 1 acre in size.	Commercially thin at 30- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regenera- tion cut, use mechanical site/prepara- tion (brush rake and disc) with expecta- tion of 50% natural regen- eration and 50% planting of 680 trees/ acre.	See other TSI.
			Manage 5% of area to high- est GSL possible up to 180 GSL to favor management indicator species; Abert's squirrel, hairy woodpecker, turkey. Extended rotation.	Same as above.	None	Burn at 20-year intervals start- ing at age 30.	Same as above.	See other TSI.
	Below 30%	Below 40 or Non- Stocked	No diversity objectives are planned for. Natural succession will take place.	Salvage existing trees when compati- ble with timber objectives.	None	None	None	None
	30-60%	All	This prescription is not suitable for these slopes. For small inclusions of this slope class, use the same direction as above.					
	Above 60%	All	Same as above.					
Aspen	All	All	Manage 100% under an 80- year rotation for maximum timber production and to favor wildlife management indicator species; deer, elk, hairy woodpecker and increased water yield.	Clearcut in blocks up to 40 acres. Clearcut entire clones.	None	None	Natural re- generation without site preparation.	None

Vegetation Management and Diversity Chart for Management Area D (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Interior Douglas-fir	Below 30%	Below 40 or Non- Stocked	Manage 100% of area for maximum timber production.	Clearcut and regen- erate.	None	None	At regenera- tion cut, use mechanical site prepara- tion. Plant clearcuts with 680 trees/acre immediately following har- vest.	None
	Below 30%	40-80 or Equi- valent Stocking	Regenerate 100% of area for timber production and wild- life objectives.	Clearcut after stand is adequately regen- erated.	None	None	Natural regen- eration with mechanical site preparation.	None
	Below 30%	80-120 or Equi- valent Stocking	Manage 10% of area in blocks greater than 100 acres to highest BA pos- sible up to 150 BA to favor wildlife management in- dicator species; hairy woodpecker, mountain bluebird.	Single tree selec- tion and group selection with 30- year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	None	None	Natural	None
			Manage 90% of the area to 120 GSL to favor wildlife management indicator spe- cies; turkey on shelter- wood areas, deer, and elk on clearcuts.	2-step shelterwood on at least 80% of the area. Make re- moval when regenera- tion is established. In previously unman- aged stands, a pre- paratory cut (remov- ing up to 30% of the BA) may be necessary 5 years before the shelterwood seed cut for windfirmness. When clearcutting is (Continued on next page.)	Commercially thin managed stands at 30-year in- tervals.	None	Burn logging debris. Plant clearcuts with 680 trees/ acre immed- iately fol- lowing har- vest, where ponderosa pine is favored. Plan on natu- ral regenera- tion for other species. At (Continued on next page.)	None

Vegetation Management and Diversity Chart for Management Area D (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
				necessary due to specific site char- acteristics, clear- cut in units below 10 acres in size and no more than 400 feet in width for seed dispersal.			shelterwood seed cut expose 40% mineral soil with mechani- cal site prep.	
	Below 30%	120+		See the direction for slopes below 30% with 80-120 BA. The same direction applies for this BA class, except that in previously unmanaged stands, two preparatory cuts may be necessary at 5-year intervals before the shelterwood seed cut (each removing up to 30% BA) for windfirmness.				
	30-60%	All		See the direction for slopes below 30%. The same direction applies for this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods. Planting of 340 trees/acre following the seed cut of the shelterwood may be necessary due to the inability to adequately prepare the site for complete natural regeneration because of slope limitations for mechanical equipment.				
	Above 60%	All	Manage 100% of area to 120 GSL for maximum timber production. Indicator species bene- fitting would be deer and elk.	Patch clearcut be- low 10 acres with no more than 400 feet in width for seed dispersal.	None	None	Prescribe burn and plant with 680 trees/acre immediately following har- vest where pond- erosa pine is to be favored. Plan on natural regeneration for other species.	None
Engelmann spruce-sub- alpine fir	Below 30%	Below 40 or Non- Stocked		Same as interior Douglas-fir, below 30% slope and below 40 BA.				
	Below 30%	Above 40 or Stocked		Same as interior Douglas-fir for all basal areas except in management objectives manage 10% of area up to 180 GSL to favor wildlife management indicator species; ruby-crowned kinglet and marten; and for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.				
	30-60%	All		Same as interior Douglas-fir for slopes 30-60% and all BA's except for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.				
	Above 60%	All		Same as interior Douglas-fir for slopes above 60% and all BA's, except for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.				

Vegetation Management and Diversity Chart for Management Area D (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Pinon pine juniper	Below 30%	N/A	Manage 100% of the area in even-age stands up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. 200-year rotation.	N/A	N/A	N/A	N/A	Chain 5% of area each decade and reseed.
	30-60%	All	Same as above.	N/A	N/A	N/A	N/A	Handcut 5% of area each decade.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					
Gambel oak	Below 60%	N/A	Manage 70% of area for oakbrush with an approxima- tion of equal distribution of size classes to favor wildlife management indica- tor species; deer, elk, bear and green-tailed towhee.	N/A	N/A	N/A	N/A	Burn at 10-year in- tervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 30% of the area for grass to favor wild- life management indicator species; elk.	N/A	N/A	N/A	N/A	Burn at 10-year in- tervals and reseed.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					
Mixed browse	All	N/A	Manage 100% of area to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. 100-year rotation.	N/A	N/A	N/A	N/A	Hand cut and/or prune 10% of area each de- cade.
Grassland	All	N/A	Manage 100% of area to retain in forage to favor wildlife manage- ment indicator species; elk, and for livestock.	N/A	N/A	N/A	N/A	Reseed to estab- lish desired forage species.

Vegetation Management and Diversity Chart for Management Area E

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Above 40 or Stocked	Manage 75% of area to 50 GSL with oak understory to favor wildlife manage- ment indicator species; deer, elk, bear, green- tailed towhee, turkey. 120-year rotation.	2-step shelterwood on at least 80% of the area. Reduce the stand to 40 basal area at the time of shelterwood seed cut. Make re- moval cut when re- generation is es- tablished. When another harvest system is neces- sary due to speci- fic site character- istics, use group selection below 1 acre in size.	Commercially thin at 20- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regener- ation cut, use mechani- cal site/ preparation (brush rake and disc) with expec- tation of 50% natural regeneration and 50% planting of 680 trees/ acre.	See other TSI. Also, protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 25% of area to highest GSL possible up to 180 GSL to favor management indicator species; Abert's squir- rel, hairy woodpecker, turkey. Extended ro- tation.	Same as above.	None	Burn at 20-year intervals start- ing at age 30.	Same as above.	See other TSI.
	Below 30%	Below 40 or Non- Stocked	Manage 70% of area for oakbrush with an approxi- mation of equal distribu- tion of size classes to favor wildlife management indicator species; deer, elk, bear, green-tailed towhee, turkey. Manage 30% of area for species other than oakbrush for added diversity.	Salvage existing trees when compati- ble with range & wildlife objectives.	None	None	None	Burn the area manag- ed for oakbrush at 20-year intervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
	30-60% All		Same as for slopes below 30% and below 40 BA.	Same as above.	None	None	None	Same as above.

Vegetation Management and Diversity Chart for Management Area E (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Aspen	Above 60%	All	Manage for natural succession to favor wildlife management indicator species; deer and elk.	None	None	None	None	Spot burn to improve forage on key winter range.
	All	All	Manage 100% under an 80-year rotation to favor wildlife management indicator species; deer, elk, hairy woodpecker. Regenerate all decadent aspen.	Clearcut in blocks up to 40 acres. Clearcut entire clones.	None	None	Natural regeneration without site preparation.	None
Interior Douglas-fir	Below 30%	Below 40 or Non- stocked	Regenerate 100% of area for timber production and wildlife.	Clearcut and regenerate.	None	None	At regeneration cut, use mechanical site preparation. Plant clearcuts with 680 trees/acre immediately following harvest.	None
	Below 30%	40-80 or Equivalent Stocking	Regenerate 100% of area for timber production and wildlife objectives.	Clearcut after stand is adequately regenerated.	None	None	Natural regeneration with mechanical site preparation.	None
	Below 30%	80-120	Manage 25% of area in blocks greater than 100 acres to highest BA possible up to 150 BA to favor wildlife management indicator species; hairy woodpecker, mountain bluebird.	Single tree selection and group selection with 30-year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	None	None	Natural	None

Vegetation Management and Diversity Chart for Management Area E (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
			Manage 75% of the area to 120 GSL to favor wildlife management indicator species; turkey on shelterwood areas, deer, elk on clearcuts.	2-step shelterwood on at least 80% of the area. Make removal cut when regeneration is established. In previously unmanaged stands, a preparatory cut (removing up to 30% of the BA) may be necessary 5 years before the shelterwood seed cut for windfirmness. When clearing is necessary due to specific site characteristics, clearcut in units below 10 acres in size and no more than 400 feet in width for seed dispersal.	Commercially thin managed stands at 30-year intervals.	None	Burn logging debris. Plant clearcuts with 680 trees/acre immediately following harvest where pond-erosa pine is to be favored. Plan on natural regeneration for other species. At shelterwood seed cut, expose 40% mineral soil with mechanical site prep.	None
Below 30%	120+ or Equivalent Stocking		See the direction for slopes below 30% with 80-120 BA. The same direction applies for this BA class, except that in previously unmanaged stands, two preparatory cuts may be necessary at 5-year intervals before the shelterwood seed cut (each removing up to 30% BA) for windfirmness.					
30-60%	All		See the direction for slopes below 30%. The same direction applies for this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods. Planting of 340 trees/acre following the seed cut of the shelterwood may be necessary due to the inability to adequately prepare the site for complete natural regeneration because of slope limitations for mechanical equipment.					
Above 60%	All		No diversity objectives are planned for. Natural succession will take place.					

Vegetation Management and Diversity Chart for Management Area E (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Engelmann spruce-sub- alpine fir	Below 30%	Below 40 or Non- stocked	Same as interior Douglas-fir, below 30% slope and below 40 BA.					
	Below 30%	Above 40 or Non- Stocked	Same as interior Douglas-fir for all basal areas except in management objectives manage 25% of area up to 180 GSL to favor wildlife management indicator species; ruby-crowned kinglet and marten; and for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.					
	30-60%	All	Same as interior Douglas-fir for slopes 30-60% and all BA's except for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.					
	Above 60%	All	Same as interior Douglas-fir for slopes above 60% and all BA's.					
Pinon pine juniper	Below 30%	N/A	Manage 100% of the area in even-age stands of up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. 200-year rotation.	N/A	N/A	N/A	N/A	Chain 5% of area each decade and reseed.
	30-60	N/A	Same as above.	N/A	N/A	N/A	N/A	Handcut 5% of area each decade.
Gambel oak	Above 60%	N/A	See ponderosa pine, slopes above 60%.					
	Below 60%	N/A	Manage 70% of area for oakbrush with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee.	N/A	N/A	N/A	N/A	Burn at 20-year intervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 30% of area for grass to favor wildlife management indicator species; elk.	N/A	N/A	N/A	N/A	Burn at 10-year intervals and reseed.
	Above 60%	N/A	See ponderosa pine, slopes above 60%.					

Vegetation Management and Diversity Chart for Management Area E (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Mixed browse	All	N/A	Manage 100% of the area to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. 100-year rotation.	N/A	N/A	N/A	N/A	Hand cut and/or prune 10% of area each decade. Plant additional browse species.
Grassland	All	N/A	Manage 100% of area to retain in forage to favor wildlife management indicator species; elk, and for livestock.	N/A	N/A	N/A	N/A	Reseed to establish desired forage species. 50% will require mechanical site preparation.

Vegetation Management and Diversity Chart for Management Area F₁ and F₂ 1/

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Above 40 or Stocked	Manage 80% of area to 50 GSL with oak under- story to favor wildlife management indicator species; deer, elk, bear, green-tailed towhee, turkey. 120- year rotation.	2-step shelterwood on at least 80% of the area. Reduce the stand to 40 basal area at the time of shelterwood seed cut. Make re- moval cut when re- generation is es- tablished. When another harvest system is neces- sary due to spe- cific site char- acteristics, use group selection below 1 acre in size.	Commercially thin at 20- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regenera- tion cut, use mechani- cal site/ preparation (brush rake and disc) with expec- tation of 50% natural regeneration and 50% planting of 680 trees/ acre.	See other TSI. Also, protect largest diameter oak in 1 to 3 acre patches up to 10% of area.
			Manage 20% of area to highest GSL possible up to 180 GSL to favor management indicator species; Abert's squir- rel, hairy woodpecker, turkey. Extended rota- tion.	Same as above.	None	Burn at 20-year intervals start- ing at age 30.	Same as above.	See other TSI.
	Below 30%	Below 40 or Non- stocked	Manage 50% of area for oakbrush with an approxi- mation of equal distri- bution of size classes. Manage 50% of area for species other than oak- brush for added diversity to favor wildlife manage- ment indicator species; deer, elk, bear, green- tailed towhee, turkey.	Salvage existing trees when compati- ble with range & wildlife objectives.	None	None	None	Burn the area managed for oak- brush at 20-year intervals. Pro- tect largest diameter oak in 1 to 3 acre patches up to 10% of area.
	30-60% All		Same as for slopes below 30% and below 40 BA	Same as above.	None	None	None	Same as above.

Vegetation Management and Diversity Chart for Management Area F₁ and F₂ 1/ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T					UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration		
Aspen	Above 60%	All	Manage for natural suc- cession to favor wild- life management indi- cator species; deer and elk.	None	None	None	None	Spot burn to improve forage on key winter range.	
	All	All	Manage 100% under an 80- year rotation to favor wildlife management indi- cator species; deer, elk, hairy woodpecker. Regen- erate all decadent aspen.	Clearcut in blocks up to 40 acres. Clearcut entire clones.	None	None	Natural re- generation without site preparation.	None	
Interior Douglas-fir	Below 30%	Below 40 or Non- stocked	Regenerate 100% of area for timber production and wildlife.	Clearcut and regen- erate.	None	None	At regen- eration cut, use mechani- cal site preparation. Plant clear- cuts with 680 trees/acre immediately following harvest.	None	
	Below 30%	40-80 or Equivalent Stocking	In sawtimber stands, regenerate 100% of area for timber pro- duction and wildlife objectives.	Clearcut after stand is adequately regenerated.	None	None	Natural re- generation with mechan- ical site preparation.	None	
	In pole or seedling/sapling stands, manage the same as shown for 80-120 BA or equivalent.								
	Below 30%	80-120 or Equivalent Stocking	Manage 20% of area in blocks greater than 100 acres to highest GSL possible up to 150 GSL to favor wildlife manage- ment indicator species; hairy woodpecker, moun- tain bluebird.	Single tree select- ion and group selec- tion with 30-year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	None	None	Natural	None	

Vegetation Management and Diversity Chart for Management Area F₁ and F₂ 1/ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
			Manage 80% of area to 120 GSL to favor wildlife management. Indicator species: turkey on shelterwood areas; deer, elk on clearcuts.	2-step shelterwood on at least 80% of the area. Make removal cut when regeneration is established. In previously unmanaged stands, a preparatory cut (removing up to 30% of the BA) may be necessary 5 years before the shelterwood seed cut for windfirmness. When clearcutting is necessary due to specific site characteristics, clearcut in units below 10 acres in size and no more than 400 feet in width for seed dispersal.	Commercially thin managed stands at 30-year intervals.	None	Burn logging debris. Plant clearcuts with 680 trees/acre immediately following harvest, where ponderosa pine is to be favored. Plan on natural regeneration for other species. At shelterwood cut expose 40% mineral soil with mechanical site preparation.	None
Below 30%		120+ or Equivalent Stocking	See the direction for slopes below 30% with 80-120 BA. The same direction applies for this BA class, except that in previously unmanaged stands, two preparatory cuts may be necessary at 5-year intervals before the shelterwood seed cut (each removing up to 30% BA) for windfirmness.					
30-60%		All	See the direction for slopes below 30%. The same direction applies for this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods. Planting of 340 trees/acre following the seed cut of the shelterwood system may be necessary due to the inability to adequately prepare the site for complete natural regeneration because of slope limitations for mechanical equipment.					
Above 60%		All	No diversity objectives are planned for. Natural succession will take place.	None	None	None	Natural	None

Vegetation Management and Diversity Chart for Management Area F₁ and F₂ 1/ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Engelmann spruce-sub- alpine fir	Below 30%	Below 40 or Non- stocked	Same as interior Douglas-fir, below 30% slope and below 40 BA.					
	Below 30%	Above 40 or Stocked	Same as interior Douglas-fir for all basal areas except in management objectives manage 20% of area up to 180 GSL to favor wildlife management indicator species; ruby-crowned kinglet and marten; and for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.					
	30-60%	All	Same as interior Douglas-fir for slopes 30-60% and all BA's except for regeneration, plant all clearcuts with 680 spruce trees/acre immediately following harvest.					
	Above 60%	All	Same as interior Douglas-fir for slopes above 60% and all BA's.					
Pinon pine juniper	Below 30%	N/A	Manage 100% of the area in even-age stands of up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. 200-year rotation.	N/A	N/A	N/A	N/A	Chain 5% of area each decade and reseed.
	30-60	N/A	Same as above.	N/A	N/A	N/A	N/A	Handcut 5% of area each decade.
	Above 60%	N/A	See interior Douglas-fir, slopes above 60%.					
Gambel oak	Below 60%	N/A	Manage 50% of the area for oakbrush with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee.	N/A	N/A	N/A	N/A	Burn at 20-year intervals. Protect largest diameter oak in 1 to 3 acre patches up to 10% of area.

Vegetation Management and Diversity Chart for Management Area F₁ and F₂ 1/ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T					UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration		
			Manage 50% of area for grass to favor wildlife management indicator species; elk.	N/A	N/A	None	N/A	Burn at 10-year intervals and reseed.	
	Above 60%	N/A	See ponderosa pine, slopes above 60%.						
Mixed browse	All	N/A	Manage 100% of the area to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. 100-year rotation.	N/A	N/A	N/A	N/A	Hand cut and/or prune 10% of area each de- cade. Plant additional browse spe- cies.	
Grassland	Below 30%	N/A	Manage 100% of area to retain in forage to favor wildlife management indi- cator species; elk, and for livestock.	N/A	N/A	N/A	N/A	Reseed to estab- lish desired forage species. 50% will re- quire mechani- cal site pre- aration.	
	Above 30%	N/A	Same as above.	N/A	N/A	N/A	N/A	Reseed to estab- lish desired forage species. No site prepa- ration.	

1/ Vegetation management for Management Area F₂ is the same as for Management Area F₁, except plant 840 trees/acre instead of 680 in clearcuts and plant 340 trees/acre following the seed cut of the shelterwood system to compensate for some domestic grazing damage to regenerating areas.

Vegetation Management and Diversity Chart for Management Area G₁

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Above 40 or Stocked	Manage 100% of area to 100 GSL. Extend rota- tion to 300 years on selected trees within the foreground zone along roads and trails. Indicator species bene- fitting would be: ruby crowned kinglet, mountain bluebird, western bluebird, gray headed junco.	2-step shelterwood in units of less than 20 acres on at least 80% of the area . Reduce the stand to 40 basal area at the time of shelterwood seed cut. Make removal cut when regenera- tion is established. When another harvest system is necessary due to specific site characteristics, use group selection be- low 1 acre in size.	Commercially thin at 30- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regenera- tion cut, use mechanical site/prepara- tion (brush rake and disc) with expectation of 50% nat- ural regen- eration and 50% plant- ing of 840 trees/acre.	None
	Below 30%	Below 40 or Non- stocked	No diversity objec- tives are planned for. Natural suc- cession will take place.	Salvage existing trees when compat- ible with recrea- tion objectives.	None	None	None	None
	30- 60%	All	Same as above.	None	None	None	None	None
	Above 60%	All	Same as above.					
Aspen	All	All	Manage 100% under an 80-year rotation to favor wildlife management indicator species; deer, elk, hairy woodpecker.	Clearcut in blocks of up to 20 acres.	None	None	Natural re- generation without site preparation.	None

Vegetation Management and Diversity Chart for Management Area G₁ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Interior Douglas-fir	Below 30%	Below 40 or Non- stocked	Regenerate 100% of area for timber production.	Clearcut in blocks up to 10 acres and regenerate.	None	None	At regenera- tion cut, use mechanical site prepara- tion. Plant clearcuts with 840 trees/acre immediately following harvest.	None
	Below 30%	40-80 or Equivalent Stocking	Regenerate 100% of area for timber production.	Clearcut in blocks up to 10 acres after stand is adequately regen- erated.	None	None	Natural regen- eration with mechanical site prepara- tion.	None
	Below 30%	80-120 or Equivalent Stocking	Manage 75% of area in blocks greater than 100 acres to 150 BA to favor wildlife management in- dicator species; hairy woodpecker and mountain bluebird.	Single tree select- ion and group selec- tion with 30-year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	None	None	Natural	None
			Manage 25% of the area with even-age system to favor wildlife manage- ment indicator species; turkey on shelterwood areas, deer, elk on clearcuts.	2-step shelterwood on at least 80% of the area. Make re- moval cut when re- generation is es- tablished. In pre- viously unmanaged stands, a prepara- tory cut (removing up to 30% of the BA) may be necessary 5 years before the shelterwood seed (Continued on next page.)	None	None	Burn logging debris. Plant clearcuts with 840 trees/acre immediate- ly follow- ing harvest, where ponder- osa pine is to be favor- ed. Plan on natural re- (Continued on next page.)	None

Vegetation Management and Diversity Chart for Management Area G₁ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
				cut for windfirm- ness. When clear- cutting is neces- sary due to spe- cific site charac- teristics, clear- cut in units below 10 acres in size and no more than 400 feet in width for seed dispersal.			generation for other species. At shelterwood cut expose 40% mineral soil with mechanical site prep.	
	Below 30%	120+ or Equivalent Stocking	See the direction for slopes below 30% with 80-120 BA. The same direction applies for this BA class, except that in previously unmanaged stands, two preparatory cuts may be necessary at 5-year intervals before the shelterwood seed cut (each removing up to 30% BA) for windfirmness.					
	30-60%	All	See the direction for slopes below 30%. The same direction applies for this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods. Planting of 420 trees/acre following the seed cut of the shelterwood may be necessary due to the inability to adequately prepare the site for complete natural regeneration because of slope limitations for mechanical equipment.					
	Above 60%	All	No diversity objectives are planned. Natural succession will take place.					
Engelmann spruce-sub- alpine fir	Below 30%	Below 40 or Non- stocked	Same as interior Douglas-fir, below 30% slope and below 40 BA.					
	Below 30%	Above 40 or Stocked	Same as interior Douglas-fir for all basal areas except in management objectives of the 80-120 and 120+ BA manage 75% of area up to 180 GSL to favor wildlife management indicator species; ruby-crowned kinglet and marten; and for regeneration, plant all clearcuts with 840 spruce trees/acre immediately following harvest.					
	30-60%	All	Same as interior Douglas-fir for slopes 30-60% and all BA's except for regeneration, plant all clearcuts with 840 spruce trees/acre immediately following harvest.					
	Above 60%	All	Same as Interior Douglas-fir for slopes above 60% and all BA's.					
Pinon pine juniper	All	All	No diversity objectives are planned for in this type. Natural succession will take place.					

Vegetation Management and Diversity Chart for Management Area G₁ (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	OVERSTORY MANAGEMENT				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Gambel oak	Below 60%	N/A	Manage 25% of area for oakbrush in blocks up to 20 acres to create a mosaic appearance with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. The remaining 75% will be managed for natural succession.	N/A	N/A	N/A	N/A	Burn at 20-year intervals.
	Above 60%	N/A	No diversity objectives are planned. Natural succession will take place.					
Mixed browse	All	N/A	Same as above.					
Grassland	All	N/A	Same as above.					

Vegetation Management and Diversity Chart for Management Area J

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Ponderosa pine	Below 30%	Below 40 or Non- stocked	Manage for natural appear- ing open spaces and visual depth.	None	None	None	None	Burn at 10-year in- tervals. Plant ground cover or grass in selected areas to develop mosaic size classes from 1/2-1 acre in size.
	Below 30%	Above 40 or Stocked	Manage to retain or create mature character. Mature stands should have moderate to large diameter (18-36"+) trees at a stand density of 50-100 basal area adequate to maintain an open park-like appearance.	2-step shelterwood in 1/2-3 acre units with similar disper- sion on at least 80% of the area. Reduce the stand to 40 basal area at time of shel- terwood cut. Make re- moval cut 20 years after seed cut. When another harvest system is necessary due to specific site characteristics, use group selection be- low 1 acre in size. Leave 2-5 large trees (yellow bark speci- mens per acre when applying either practice.	Commercially thin at 20- year inter- vals.	Burn at 10-year intervals start- ing at age 30.	At regener- ation cut, use mechani- cal site/ preparation (brush rake and disc) with expec- tation of 50% natural regeneration and 50% planting of 680 trees/ acre.	See other TSI. Also, plant ground cover or grass.
	Above 30%	All	Manage for natural suc- cession except where treatment is needed to add diversity.	None	None	None	None	Spot burn to add diversity.
Aspen	Below 60%	All	Maintain an attractive mix of stands with variety of sizes, heights and ages. Do not convert to conifers.	Clearcut as stands become decadent or as natural succession replaces aspen with conifer. Limit clear- cuts to 2 acres in the Retention Zone and to 5 acres in the Partial Reten- tion Zone.	None	None	Natural re- generation without site preparation.	Remove conifers by hand cutting.

Vegetation Management and Diversity Chart for Management Area J (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T					UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration		
Interior Douglas-fir	Above 60%	All	Manage for natural suc- cession.	None	None	None	None	None	None
	Below 30%	Below 40 or Non- Stocked	Restore to forested appearance by regen- erating 100% of area.	Clearcut and regen- erate.	None	None	At regener- ation cut, use mechani- cal site preparation. Plant clear- cuts with 680 trees/ acre immedia- tely follow- ing harvest.	Allow colorful shrub and ground cover species to intermix with seedlings and sapling age class.	
	Below 30%	40-80 or Equivalent Stocking	Same as above.	Clearcut after stand is adequately regen- erated.	None	None	Natural re- generation with mechan- ical site preparation.	Same as above.	
	Below 30%	80-120 or Equivalent Stocking	Manage for a represen- tation of large tree character (36" average diameter in mature stands). Introduce small scale diversity of different age classes. Make pro- gressive small scale entries designed se- quentially beginning from the rear of treat- ment area and pro- gressing to front (observer's position.) Give maximum atten- tion to debris dis- posal.	2-step shelterwood in 3-5 acre units on at least 80% of the area. Make removal cut when regenera- tion is established. In previously un- managed stands, a preparatory cut (re- moving up to 30% of the BA) may be neces- sary 5 years before the shelterwood seed cut for windfirm- ness. When clear- cutting is neces- sary due to speci- fic site character- istics, clearcut in units of 3-5 acres in size and no more than 400 feet in width for seed dispersal. 185-year rotation.	Commercially thin managed stands at 20-year in- tervals.	None	Burn logging debris. Plant clearcuts with 680 trees/acre immediately following harvest where pond- erosa pine is favored. Plan on nat- ural regener- ation for other species. At the shel- terwood seed cut, expose 40% mineral soil with mechanical site prep.	Same as above.	

Vegetation Management and Diversity Chart for Management Area J (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Engelmann spruce-sub- alpine fir	Below 30%	Below 120+ or Equivalent Stocking	See the direction for slopes below 30% with 80-120 BA. The same direction applies for this BA class, except that in previously unmanaged stands, two preparatory cuts may be necessary at 5-year intervals before the shelterwood seed cut (each removing up to 30% BA) for windfirmness.					
	30-60%	All	See the direction for slopes below 30%. The same direction applies for this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods. Planting of 340 trees/acre following the seed cut of a shelterwood may be necessary due to the inability to adequately prepare the site for complete natural regeneration because of slope limitations for mechanical equipment.					
	Above 60%	All	No diversity objectives are planned for. Natural succession will take place.					
	Below 30%	Below 40 or Non- Stocked	Same as interior Douglas-fir, below 30% slope and below 40 BA.					
	Below 30%	40-80 or Equivalent Stocking	Same as interior Douglas-fir, below 30% slope and existing BA 40-80.					
Pinon pine juniper	Below 30%	Above 80 or Equiva- lent Stocking	Manage 100% of the area to strive for a variety of age class distribution (young to old).	Single tree selection and group selection with 30-year cutting cycle. Use Q factor of 1.3 and a DBH objective of 24 inches.	N/A	Natural	None	None
	30-60%	All	See the direction for slopes below 30%. The same direction applies to this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods.					
	Above 60%	All	No diversity objectives are planned for. Natural succession will take place.					
	Below 30%	N/A	Introduce or maintain natural appearing openings of 10-20 acres.	N/A	N/A	N/A	N/A	Chain 5-10% of area each decade.
	30-60%	N/A	Same as above.	N/A	N/A	N/A	N/A	Hand cut 5% of area each decade.
	Above 60%	N/A	No diversity objectives are planned for. Natural succession will take place.					

Vegetation Management and Diversity Chart for Management Area J (Continued)

SPECIES OR VEGETATION	SLOPE CLASS	EXISTING BASAL AREA OR STOCKING	MANAGEMENT OBJECTIVES	O V E R S T O R Y M A N A G E M E N T				UNDERSTORY MANAGEMENT
				Harvest Method	Intermediate Cuts	Other Timber Stand Improvement	Regeneration	
Gambel oak	Below 30%	N/A	Maintain or create diversity through introduction and/or maintenance of natural appearing openings in 60% of vegetation type.	N/A	N/A	N/A	N/A	Use mechanical site preparation and seed grass.
	30-60%	N/A	Same as above. The same direction applies to this slope class, except that prescribed burning is to be used for site preparation instead of mechanical methods.					
	Above 60%	N/A	See pinon pine juniper, slopes above 60%.					
Mixed browse	Below 60%	N/A	Maintain or introduce shrubs and browse of various textures and colors.	N/A	N/A	N/A	N/A	Plant seedlings.
	Above 60%	N/A	See pinon pine juniper, slopes above 60%.					
Grass	All	N/A	Manage 100% of area to retain parks and grass stands for viewing diversity. Retain or enhance viewing opportunities into parks.	N/A	N/A	N/A	N/A	Seed grass.

APPENDIX B

TEN-YEAR TIMBER SALE AND
REFORESTATION SUMMARIES

Ten-Year Timber Sale Summary

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/					Logging Method 3/	Volume MMBF by Type	Road Miles
					IC	CC	SW-P	SW-S	SW-R	SEL		
81	Can Bear It #1	Animas	D, 33D0, H21G0-414 D, 33D0, H32G0-419 T38N,R8W, Sec. 25,35,36	SF				269		T	1.40	.4 3.3
81	Lift #6	Animas	G1, 35H1, H52G0-401 I, 35H2, H21G0-405 T39N, R9W, Sec. 21,22,27,28	SF		90				T	1.55	-- --
81	Mill Creek	Animas	B, 29A2, 122FR-400 J, 29A2, 122FO-400 T39N, R8W, Sec. 7, 18	DF					65	T	.12	-- --
81	Lone Cone	Dolores	F1, 49C0, S21G0-000 F1, 49C0, I31G0-000 F1, 40C0, I32GX-000 T41N, R12W, Sec. 6,7,18	ES AS		50	700			T	5.80 0.40	11.0 4.0
81	Ranger Sales	Dolores	D, 49D0, I21G0-000 T41N, R12W, Sec. 16,21,22	ES	800					T	2.30	-- --
81	Chicken Creek	Mancos	D, 41A0, H21D0-205 T37N, R13W	PP	1700					T	3.45	4.0 5.0
81	Small Sales	Mancos	Various	AS		245				T	2.45	-- --
81	Willow Draw	Pagosa	F2, 07B0, S21D0-812 F2, 07B0, S21D0-823 T35N, R1E, Sec. 1,2, 10-15	PP	1076					T	2.20	9.0 --
81	Turkey Springs #2	Pagosa	D, 13L0, H21D0-801 D, 15D1, S21D0-801 D, 15D1, H21D0-803 A1, 15D1, S21D0-804 T36N, R2½W, Sec. 25-37, 34-36 T35N, R2½W, Sec. 1-3, 10-15 T35N, R3W, Sec. 12,13,36	PP	3160					T	4.40	8.2 0.8
81	Four Mile	Pagosa	D, 07D2, M22FL-826 T37N, R2W, Sec. 26,27,34,35	ES,WF DF,AS	680					T	3.30 2.70 Dead .65 6.65	5.5 --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	A r e a L o c a t i o n 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/ IC CC SW-P SW-S SW-R SEL				Logging Method 3/ T	Volume MMBF by Type	R o a d M i l e s C R	
					IC	CC	SW-P	SW-S			C	R
81	Uncle Charlie Aspen Pine		D, 17F2, H21D0-606 D, 13C0, H21D0-600 T35N, R5W, Sec. 8,9,16,17	AS	107				T	.88	.5	2.3
81	Freeman Creek	Pine	D, 13C0, H21D0-600 D, 13C0, S22D0-630 D, 13C0, S23D0-600 D, 13C0, H21D0-604 T35N, R5W, Sec. 15,15,21,22,23, 25,26,27,28,34,35,36 T35N, R4W, Sec. 31 T34N, R4W, Sec. 6,7 T34N, R5W, Sec. 12	DF PP	1523 2284	200			T T	1.90 3.50	-- 3.7	-- 17.5
82	Wallace Lake	Animas	F2, 33A0, S32F0-403 D, 33C0, H21G0-413 T36N, R8W, Sec. 5 T37N, R8W, Sec. 1,2,11,12	DF	85				T	.51	--	--
82	Can Bear It #2	Animas	D, 23B2, H22G0-412 D, 33D0, H32F0-403 D, 33D0, H21G0-414 D, 33D0, H32G0-419 T37N, R7W, Sec. 6 T38N, R8W, Sec. 35,36 T38N, R7W, Sec. 30,31	SF			1461		T	2.10	.7	5.5
82	Dunton	Dolores	D, 49B0, H21G0-004 D, 49D0, H52G0-001 F1, 49D0, S21G0-001 T40N, R12W, Sec. 2,3,4,5 T41N, R11W, Sec. 30,31 T41N, R12W, Sec. 35,36	ES			1400	600	T	8.00	2.0	11.0
82	Ranger Sales	Dolores	D, 47B2, H21G0-007 T39N, R12W, Sec. 4,8,17	ES	1000				T	3.20	--	--
82	Grouse Point	Mancos	D, 45B0, H21D0-201 T37N, R14W	PP	2028				T	2.95	7	3
82	Small Sales	Mancos	Various	AS		200			T	2.00	--	--

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type		Road Miles
					IC	CC	SW-P	SW-S	SEL			
82	Mosca #2	Pagosa	D, 11A2, H21G0-800 D, 13J2, H32G0-800 D, 13J2, I22G0-801 D, 13J2, H52G0-803 D, 13F3, H22G0-802 D, 13H2, H21G0-803 D, 13H2, H31G0-800 T37N, R5W, Sec. 34,35 T38N, R4W, Sec. 12,13 T38N, R4W, Sec. 11,12,19,20,29-32	SF	1129					T	SF 5.1 Dead 1.9 7.0	5.2 17.4
82	Mule Mountain	Pine	D, 13B0, H21D0-601 D, 13A2, H21F0-607 D, 13A2, H21D0-602 D, 13A2, H32F0-600 T35N, R4W, Sec. 33,34 T34N, R4W, Sec. 3,4	DF PP	472 315		262			T T	1.40 .60	-- 1.2 4.9
82	Piedra Roadside	Pine	D, 13E0, H22D0-606 B, 13E0, H52G0-606 B, 13B0, H21D0-608 A, 13B0, H53D0-608 N, 13B0, H52D0-603 T35N, R4W, Sec. 16,17,20,29,32	PP	469					T	.12	--
82	Fossett Roadside	Pine	J, 13C0, S23D0-604 J, 13C0, S23D0-601 J, 13C0, S33D0-601 F2, 15B1, S22C0-606 T34N, R5W, Sec. 10,11,14,15 T34N, R4W, Sec. 4,9,10	PP	214					T	.15	--
82	Baldy Top	Pine	D, 13G1, H21G0-601 D, 13G1, H21G0-603 D, 13D0, H21F0-600 T36N, R5W, Sec. 28,33	SF		80				T	.23	--
83	Hermosa East	Animas	G1, 35H1, H52G0-401 T39N, R9W, Sec. 19,20,21, 28, 29, 30	SF					800	HFT	3.20	1.9 1.2

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume		Road Miles
					IC	CC	SW-P	SW-R		MMBF by Type	MMBF by Type	
83	Small Sales	Animas	D, 33C0, H32F0-406 T37N, R8W, Sec. 10,11,15	AS	20				T	.16		--
83	Cinco Milas	Dolores	B, 47B1, H21F0-001 D, 47B1, H21G0-001	ES	500		800		T	5.10		--
83	Bradfield	Dolores	D, 53B0, H21D0-009 D, 53B0, S21D0-007 B, 53B0, H21D0-003 B, 53B0, S21D0-002 T40N, R16W, Sec. 5,6,7,8,17,18 T40N, R17W, Sec. 1,2,11,12,13,14,24	PP	2400				T	3.60		1 7
83	Ranger Sales	Dolores	D, Various	ES	800				T	2.50		--
83	Haycamp	Mancos	B, 45B0, H21D0-201 B, 45C0, H21D0-203 T37N, R14W	PP	4300		600		T	6.00		5 8
83	Small Sales	Mancos	Various	AS	200				T	2.00		--
83	Chris Mountain	Pagosa	E, 13A3, H22D0-800 B, 13L0, H22D0-801 B, 13L0, H22D0-805 B, 13L0, S32D0-801 T35N, R3W, Sec. 15,21 22,23,27-29, 32,33	PP-DWF	1610				T	PP 2.30 DWF 0.90 3.20		.1 5.5
83	Fall Creek	Pagosa	G1, 09E0, E72GL-800 T37N, R1E, Sec. 10	SF	60				T	SF 0.35 Dead 0.15 0.50		.1 --
83	Dutton	Pagosa	D, 07D1, S22D0-809 A, 07D1, S21D0-807 T36N, R2W, Sec. 3	PP,DWF	160				T	PP 0.70 DWF 0.10 0.80		-- .7
83	West Prong	Pine	D, 13G1, H21G0-600 D, 13G1, H31G0-603 T36N, R5W, Sec. 5,7,8,17,18	SF		770		85	T	3.10		7.1 --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	A r e a L o c a t i o n 1/-Management, Geographic, and Capability Areas		Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume	
						IC	CC	SW-P	SW-S	SW-R	MMBF by Type	R o a d Miles C R
83	Beaver Slopes #2	Pine	D, 17G2, H21G0-602 D, 17G2, H22F0-601 T36N, R5W, Sec. 30,31		SF	163				T	.52	.5 1.06
83	Bull Canon	Pine	F1, 15B1, S22C0-606 F1, 15B1, S22D0-610 T34N-Ute, R5W, Sec. 5,9,16,19		PP	980				T	1.20	.4 5.0
84	Can Bear It #3	Animas	D, 33C0, H32F0-406 D, 33C0, H21G0-413 T37N, R8W, Sec. 10,11,14,15		AS	150				T	.90	.3 --
84	Coal Creek	Animas	J, 29C0, H22GX-404 T40N, R8W, Sec. 28,29,32		SF				50	T	.20	.3 --
84	Tin Can	Animas	I, 35H2, H21G0-403 I, 35H1, H21G0-405 T39N, R9W, Sec. 11,14,23		SF	200				T	1.11	.3 1.4
84	Small Sales	Animas	D, 35H2, H22G0-403 D, 35H2, H32G0-405 I, 35H2, H32G0-411 T39N, R9W, Sec. 7,8,9,15,16,17		SF				60	T	.32	-- --
84	Little Fish Aspen	Dolores	F1, 49C0, S22F0-000 F1, 49C0, H21F0-009 T41N, R12W, Sec. 30,31		AS	650				T	4.50	3 1
84	Ponderosa Jack	Dolores	D, 51D0, H22D0-002 D, 51D0, M21D0-003 D, 51D0, H21D0-037 B, 51D0, H51D0-010 T38N, R15W, Sec. 1,12,13,24 T38N, R14W, Sec. 5,6,7,18		PP	2000				T	3.00	-- 4
84	Morrison Creek	Dolores	G1, 49F0, H21I0-000 D, 49F0, H32G0-000 D, 49F0, H32G0-001 D, 49F0, H21G0-010 D, 49F0, H21G0-011 D, 49F0, H21G0-012 T41N, R11W, Sec. 25,26,34,35,36		ES	1220			300	T	7.60	6 --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/					Logging Method 3/	Volume MMBF by Type	Road Miles		
					IC	CC	SW-P	SW-S	SW-R				SEL	
84	Ranger Sales	Dolores	D, Various	ES	800					T	2.50	--	--	
84	Driveway	Mancos	D, 45D0, H21G0-200 D, 45D0, H21F0-201 T38N, R12W	SF AS	950	300				T T	4.50 2.50	4	8	
84	Small Sales	Mancos	Various	AS		200				T	2.00	--	--	
84	Trail Ridge	Pagosa	D, 11C2, M22F0-803 D, 11C2, H21D0-805 D, 11C2, H21F0-804 D, 11A1, H21F0-805 T36N, R3W, Sec. 5, 7, 8, 17-20 T37N, R3W, Sec. 5, 7, 8, 17-20 T38N, R3W, Sec. 32	PP,DWF A	2002					T	PP 2.58 DWF 2.85 A 0.57 6.00	3.4	9.1	
84	Aspen Spur	Pagosa	D, 05I0, M32F0-808 D, 05I0, M32F0-801 D, 05I0, E72G0-825 T35N, R1E, Sec. 9, 10, 15, 16	SF,DWF AS	390					T	SF 0.47 DWF 0.24 A 1.20 Dead 0.22 2.14	0.8	3.5	
84	Monument Park	Pine	D, 13I1, H52G0-604 D, 13I1, H52G0-603 D, 13I2, H22F0-803 D, 13E0, H22F0-603 D, 13K1, H22F0-606 D, 13K1, H52G0-608 T36N, R4W, Sec. 33,34 T35N, R4W, Sec. 1,2,3,11,12,13	DF SF			1302 400			145 45	T, HFT (15%) T	2.60	3.10 15.0	--
84	Unidentified Ranger Sales	Pine	Unknown at this time		(Dependent on location/species type)						T	.50	--	--
85	Dutch Creek	Animas	G1, 35C0, H22G0-409 T38N, R9W, Sec. 3,4,9,10	SF					800	T	2.50	4.0	--	
85	Small Sales	Animas	B, 37B0, S33G0-400 T36N, R10W, Sec. 2,11	AS		25				T	.20	--	--	

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/					Logging Method 3/	Volume MMBF by Type		Road Miles
					IC	CC	SW-P	SW-S	SW-R		SEL	Type	
85	Deer Creek	Dolores	D, 49A2, H21FO-010 T40N, R12W, Sec. 19, 20, 21, 30	AS	400					T	3.00	--	3
85	Clear Creek	Dolores	F1, 49C0, S22FO-000 F1, 49D0, I32GR-000 F1, 49D0, S22FO-001	AS	200					T	1.50	1	1
85	Hell Spring	Dolores	D, 47C0, H21FO-012 D, 47C0, H21GO-007 D, 47C0, H52FO-004 D, 47C0, H52GO-004 D, 47C0, H21GO-028 G1, 47C0, H52GO-003 T39N, R12W, Sec. 3, 4, 5	ES	1600	300				T - 30% C - 70%	7.50	4	6
85	Ranger Sales	Dolores	D, Various	ES	800					T	2.50	--	--
85	Upper Turkey	Mancos	B, 45C0, H21FO-203 B, 45C0, S21FO-200 T37N, R12W	AS	250					T	2.50	2	2
85	Rush	Mancos	B, 41A0, S21FO-201 B, 41A0, S21FO-202 B, 41A0, S21EO-202 D, 41A0, S21GO-201 T37N, R12W	AS	210					T	2.10	--	--
85	Small Sales	Mancos	Various	AS	200					T	.40	--	--
85	Benson Creek	Pagosa	D, 05C0, M22D0-800 T33N, R1E, Sec. 4, 5 T34N, R1E, Sec. 28, 29, 31-34	PP	1804					T	2.00	--	--
85	Piedra Cade	Pagosa	D, 11I2, M22FL-824 A2, 15D2, M22FL-825 A1, 15D1, S22D0-805 A1, 15D1, S22FO-801 T37N, R2W, Sec. 29, 32, 33 T36N, R2W, Sec. 4, 5, 6	SF, DWF AS	850					T	SF 0.50 DWF 2.00 A 0.50 3.00	5.0	--

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type	Road Miles C R
					IC	CC	SW-P	SW-S	SW-R		
85	Lion Creek	Pine	D, 19C1, S32FO-600 D, 19C1, S22FO-603 D, 19C1, S22FO-604 D, 19D2, S22FO-605 D, 19D2, S32GO-605 T36N, R6W, Sec. 1,2,9,10,11,12, 13,14,15 T36N, R5W, Sec. 6,7	DF	1470				165	T, HFT (10%) 3.50	12.2 .5
85	Trout Creek	Pine	D, 13G1, H21GO-600 B, 13G1, H32GO-600 B, 13G1, H22FO-600 T36N, R5W, Sec. 8,9,10,15, 16,17,18,20,21,22	DF		2394			266	T	5.70 16.1 --
85	Arbogas Aspen	Pine	D, 17G1, H22DO-604 T36N, R6W, Sec. 35,36	AS	38					T	.20 -- --
85	Unidentified Ranger Sales	Pine	Unknown at this time		(Dependent on locations/species type)				T	.30	-- --
86	Grasshopper	Animas	D, 33D0, I52GX-400 D, 33D0, I22GO-401 D, 33D0, H22GO-415 T38N, R8W, Sec. 2,3,10,11	ES	500					T	2.00 3.0 3.0
86	Good Hope	Animas	D, 37B0, H42GO-400 B, 37B0, S33GO-400 T36N, R10W, Sec. 1,2,11,12,13	ES					50	T	.60 -- .5
86	Small Sales	Animas	D, 35H2, H32GO-411 B, 33A0, H32FO-407 T37N, R8W, Sec. 22 T39N, R9W, Sec. 15	AS		30				T	.25 -- --
86	Fader	Dolores	D, 53B0, H21DO-002 B, 55A0, H21DO-001 T41N, R17W, Sec. 2,3,4,5,9, 10,11,14,15 T42N, R17W, Sec. 29,30,31,32 33,34	PP			1500			T	3.00 -- --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type		Road Miles C R	
					IC	CC	SW-P	SW-S	SW-R	SEL	Type	C	R
86	Pease Point	Dolores	B, 49C0, S21F0-000 B, 49C0, H21F0-007 B, 49B0, S21D0-013 B, 49B0, S21E0-001 B, 49B0, S22D0-018 B, 49B0, S22D0-019 B, 49B0, S22E0-005	AS	850						6.00	6	6
86	Roaring Ridge	Dolores	G1, 47H1, H21G0-026 G1, 47H1, H21G0-017 G1, 47H1, H21G0-029 G1, 47H1, H52G0-010 B, 47G1, H21F0-013 B, 47G1, H52F0-016 D, 47G1, H21G0-025 F2, 47G1, H51G0-002 T39N, R10W, Sec. 20, 21, 29, 30, 31 T38N, R11W, Sec. 1, 2, 3, 4, 11, 12	ES	800				500	T - 40%	3.00	2	5
				AS	150						1.00	--	--
86	Ranger Sales	Dolores	D, Various	ES	800						2.50	--	--
86	Starvation	Mancos	D, 39B0, M22D0-202 T36N, R12W	PP			300				.30	--	--
86	Caviness	Mancos	D, 39B0, H31F0-200 D, 39B0, I32G0-200 T36N, R12W	AS	600						6.00	8	5
86	Small Sales	Mancos	Various	AS	200						2.00	--	--
86	Lower Middle Mtn.	Pagosa	D, 13K2, H22F0-800 D, 13K2, H22D0-803 T35N, R3W, Sec. 5, 6, 7, 8, 16, 17, 18, 20, 21	PP SF AS DWF	500 540 20 350				60		All 8.00	8.0	1.0

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type	Road Miles
					IC	CC	SW-P	SW-S	SEL		
86	Snow Springs	Pine	D, 13K1, H52GO-608 D, 13K1, H22GO-604 D, 13A2, S22DO-631 D, 13A2, H22FO-605 D, 13A2, H22GO-604 B, 13K1, H21GO-604 T35N, R4W, Sec. 23, 24, 25 T35N, R3W, Sec. 18, 19, 30, 31, 32	DF PP SF	250		50	50		.75 1.82 2.70	-- -- 15.9
86	Unidentified Ranger Sales	Pine	Unknown at this time	AS	130					.83	--
87	Coon Fir	Animas	B, 33A0, H21FO-407 T37N, R8W, Sec. 27, 28, 33, 34	DF	125					1.00	.5
87	Monument Hill	Animas	D, 37B0, H21GO-409 D, 37B0, S32GO-401 D, 37B0, H32GO-415 T37N, R10W, Sec. 27, 28, 29, 33, 34	SF	500					2.00	3.0
87	Long Park	Dolores	D, 53C0, H21DO-010 D, 53C0, H21DO-011 B, 53C0, H51DO-006 B, 53C0, H21DO-015 T40N, R16W, Sec. 14, 15, 22, 23, 27, 28, 32, 33, 34	PP	800		500			4.00	2
87	Barlow Creek	Dolores	J, 43D0, S22GO-016 J, 43D0, H52GO-011 J, 43D0, I32GX-011 T40N, R10W, Sec. 15, 22, 23, 24	ES					2000	8.00	8
87	Ranger Sales	Dolores	D, Various	ES	1000					3.00	--
87	Echo-Echo	Mancos	D, 41C0, S21GO-203 D, 41C0, S32FO-201 T37N, R12W	AS		100				1.00	2

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3/ T - Tractor, HFT - High Flotation, C - Cable Systems

Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/					Logging Method 3/	Volume MMBF by Type		Road Miles
					IC	CC	SW-P	SW-S	SW-R		SEL	Type	
87	Daisy Mae	Mancos	D, 41C0, S21C0-206 D, 41C0, S21C0-202 T37N, R12W	SF			700			T	2.00	2	3
87	Horseshoe	Mancos	D, 41C0, S21C0-200 T38N, R12W	SF					350	Horse Skid	.70	1	--
87	Small Sales	Mancos	Various	AS		200				T	2.00	--	--
87	Poison Park #2	Pagosa	D, 13K2, H22FO-800 D, 13K2, H22DO-803 T38N, R4W, Sec. 11,12	SF A	270	30			30	T	SF 1.80 AS 0.20	1.5	
87	Devil Creek	Pagosa	D, 13L0, H22DO-804 D, 13L0, H22FO-804 T35N, R3W, Sec. 3,4,9,10,16	PP			900			T	PP 2.50	--	2.0
87	Fish Creek	Pagosa	D, 05E0, M32FL-802 F2, 05E0, E73GO-804 F2, 05E0, M32FL-839 F2, 05E0, E52FO-800 T34N, R2E, Sec. 3 T35N, R2E, Sec. 27,28,33,34	SF AS		180			480	HFT	SF 2.00 AS 1.00	3.0	
87	Rocky Basin	Pine	B, 19D3, M22GL-600 B, 19D3, H22GO-616 T37N, R5W, Sec. 21,22,27,28,29,32	SF	484		424		117	T, HFT (20%)	6.30	13.5	1.0
87	Unidentified Ranger Sales	Pine	Unknown at this time	AS		130				T	.83	--	--
88	Butler	Animas	J, 33B0, H63FX-401 G1, 33B0, H22GO-410 T39N, R9W, Sec. 26,27,28,33,34,35	SF					500	T	1.75	--	--
88	Blodget	Animas	B, 33A0, H21GO-415 D, 33C0, H21GO-413 T37N, R8W, Sec. 11,14,15,22	AS		75				T	.55	.5	.5

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type	Road Miles
					IC	CC	SW-P	SW-S	SEL		
88	Small Sales	Animas	G1, 33B0, J23DX-400 B, 33B0, H22D0-402 T38N, R9W, Sec. 24,25,36 T38N, R8W, Sec. 19,30,31	SF&AS	20	40				.30	1.0 --
88	Wild Bill	Dolores	B, 53B0, H21D0-003 B, 53B0, H21E0-000 T41N, R17W, Sec. 21,22,25,26 27,35,36 T40N, R3W, Sec. 3	PP			2000			4.00	2 9
88	Twin Eagle	Dolores	D, 49A2, H21F0-010 D, 49C0, H21F0-011 F2, 47C0, H21G0-005 T40N, R12W, Sec. 25,26,27,28 29, 30, 31,33	ES AS	1000	450			300	4.00 3.00	6 3
88	Bear Creek	Dolores	D, 47D1, H21G0-019 D, 47D1, H21G0-024 D, 47E1, H21G0-020 D, 47E1, H21G0-023 D, 47G1, H21G0-021 D, 47G1, H31CX-000 D, 47G1, H31CX-001 D, 47G1, H21G0-002 T38N, R11W, Sec. 20,21,27,28 29,34,35	ES	1500					3.00	-- 6
88	Ranger Sales	Dolores	D, Various	ES	800					2.50	-- --
88	Silver Creek	Mancos	F, 41B0, H21F0-209 F, 41B0, S22F0-201 T37N, R12W	AS		250				2.00	-- 4
88	East Mancos	Mancos	F, 41D0, H21D0-210 F, 41D0, H21D0-214 T36N, R12W	PP			350			.30	-- 1
88	Pole Spring #2	Mancos	D, 45D0, H21G0-200 T38N, R12W	SF			600			3.00	-- --
88	Small Sales	Mancos	Various	AS		200				2.00	-- --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type	Road Miles
					IC	CC	SW-P	SW-S	SEL		
88	Lower Sandbench	Pagosa	D, 11A2, H21G0-813 T37N, R4W, Sec. 9,10,14,15,22,23 T36N, R4W, Sec 1,12 T36N, R3W, Sec. 6,7	SF	1110		400		170	8.00	2.0 --
88	East Creek #1	Pine	D, 19D2, S22G0-605 D, 19D3, S32G0-604 T37N, R5W, Sec. 32,33 T36N, R5W, Sec. 5,6	SF	515		491		133	7.00	5.5 --
88	Unidentified Ranger Sales	Pine	Unknown at this time	AS	130					.83	-- --
89	Cascade Creek	Animas	D, 29D0, H52G0-409 D, 29D0, H22G0-404 D, 29D0, H32G0-408 D, 29D0, H22G0-405 D, 29D0, H32G0-409 T40N, R9W, Sec. 21,22,27,28,33,34 T39N, R9W, Sec. 2,3,4,10,11	SF	450					2.50	3.0 3.0
89	Small Sales	Animas	B, 33A0, H21G0-415 B, 33A0, H32F0-407 T37N, R8W, Sec. 15,22	AS	50					.30	2.0 --
89	Ferris Canyon	Dolores	D, 53E1, H21D0-012 D, 53E1, H21D0-013 B, 53E1, H21E0-003 D, 53E2, H21D0-017 T39N, R16W, Sec. 8,9,10,11,12 13,14,15,17	PP			1000			2.00	-- 4
89	Head Priest	Dolores	D, 47F2, H21G0-008 G1, 47F2, H62F0-013 G1, 47F2, H31G0-000 G1, 47C0, H32G0-001 G1, 47C0, H52G0-003 G1, 47C0, H21G0-014 G1, 47C0, H21G0-015	ES			1000		300	4.00	1 7

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type		Road Miles C R
					IC	CC	SW-P	SW-S	SEL			
89	Sheep Mountain	Dolores	G1, 43E0, S22G0-012 G1, 43E0, S22G0-013 G1, 43E0, S22G0-011 G1, 43F0, M22G0-000 G1, 43F0, S22G0-014 T41N, R9W, Sec. 19,30 T41N, R10W, Sec. 24,25,30	ES	700				1200	T - 70% C - 30%	7.00	12 --
89	White Knuckles	Dolores	B, 47B1, H21F0-001 B, 47A0, H21F0-002 T39N, R13W, Sec. 34,35 T38N, R13W, Sec. 2,3	AS		300				T	2.00	3 --
89	Ranger Sales	Dolores	D, Various	ES	1000						3.00	-- --
89	Lucy	Mancos	B, 41B0, S21F0-203 B, 41B0, H21F0-208 T37N, R12W	AS		200				T	2.00	2 2
89	Sawmill	Mancos	F, 37A0, H31F0-204 F, 37A0, S22D0-208 F, 37A0, H31F0-202 T36N, R11W	AS		300				T	3.00	7 --
89	Small Sales	Mancos	Various	AS		200				T	2.00	-- --
89	Rig Branch	Pagosa	D, 05C0, M32D0-800 E, 05C0, M32D0-801 T34N, R1E, Sec. 14-16,21,22 27-29	PP	697		100			T	4.50	4 1
89	Quien Sabe	Pagosa	D, 07D2, S22F0-805 D, 07D2, M22FL-826 B, 07D2, E22F0-802 B, 07D2, M22FL-828 T36N, R2W, Sec. 2-3 T37N, R2W, Sec. 35-36	SF AS	245	250			55	HFT/T	3.00 1.50	4.0

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/				Logging Method 3/	Volume MMBF by Type	Road Miles C R
					IC	CC	SW-P	SW-S	SEL		
89	Slide Mountain	Pine	D, 13G1, H31G0-603 D, 13G1, H21G0-600 T37N, R5W, Sec. 33,34 T36N, R4W, Sec. 3,4,8,9,10	SF	253		427		77	T, HFT (10%) 4.60	-- --
89	Zabel Canon	Pine	G1, 17A1, S22A0-601 T34N Ute, R6W, Sec. 20,21,28,29	PP			238			T .50	-- 1.1
89	Unidentified Ranger Sales	Pine	Unknown at this time	AS		130				T .83	-- --
90	Grassy Creek	Animas	J, 35G2, H32G0-401 J, 35G2, H22G0-400 T40N, R9W, Sec. 20,29,30,31,32 T40N, R10W, Sec. 36	SF					600	T 3.00	4.0 4.0
90	Lower House Creek	Dolores	D, 51D0, H22D0-002 D, 51D0, H21D0-037 F2, 51D0, S22D0-007 B, 51D0, H21D0-010 T38N, R15W, Sec. 2,10,11,12 13,14,15,23	PP	650					T 2.00	1 2
90	Italian Canyon	Dolores	D, 45A0, H21D0-038 T37N, R15W, Sec. 1 T37N, R14W, Sec. 5,6	PP	300					1.00	-- 2
90	Rocky Draw	Dolores	B, 51C2, H21D0-040 B, 51C2, H21D0-003 B, 51C2, H21D0-033 T39N, R14W, Sec. 13,14,15	PP AS	300	150				1.00 1.00	1 3 -- --
90	Rio Lado	Dolores	D, 47G1, H21F0-015 D, 57G1, H31G0-004 T38N, R11W, Sec. 6,8,16	AS		350				T - 80% C - 20%	3 2
90	Geyser Park	Dolores	D, 49E0, H22G0-000 T40N, R11W, Sec. 5,7,8,17	ES	2000					T - 70% C - 30%	5 --
90	Ranger Sales	Dolores	D, Various	ES	1000					T 3.00	-- --

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Ten-Year Timber Sale Summary (Continued)

Fiscal Year	Sale Name	Ranger District	Area Location 1/-Management, Geographic, and Capability Areas -Twp., Rge., Sec.	Timber Type	Net Acres Cut by Harvest System 2/					Logging Method 3/	Volume MMBF by Type		Road Miles	
					IC	CC	SW-P	SW-S	SW-R	SEL	Type		C	R
90	Morgan	Mancos	D, 45D0, H21F0-201 B, 45D0, H21F0-200 T38N, R13W	AS AS		450 100					4.50 1.00		3 --	6 --
90	Small Sales	Mancos	Various	AS		200					2.00		--	--
90	Middle Mountain	Pagosa	D, 1312, H22F0-803 D, 13K2, H22F0-800 T35N, R3W, Sec. 5-8 T35N, R4W, Sec. 1,12 T36N, R3W, Sec. 31,32 T36N, R4W, Sec. 36	SF A	1260	50			140		7.70 0.30		8	--
90	Wolf Creek Pass	Pagosa	J, 09E0, E83GX-810 J, 09E0, M21G0-800 G1, 09E0, E72GL-800 T38N, R1E, Sec. 36 T37N, R2E, Sec. 6	SF					440		.80		--	--
90	East Creek #2	Pine	D, 19D3, S32G0-604 T37N, R5W, Sec. 27,28,33,34	SF	738				148	T,HFT (30%)	5.60	5.0	--	--
90	South Monument	Pine	D, 13K1, H52G0-608 D, 13K1, H22G0-604 B, 13K1, H21G0-604 T35N, R4W, Sec. 11,12,13,14, 23,24 T35N, R3W, Sec. 18	SF	210				25	T	1.50	1.3	1.0	
90	Salt Creek	Pine	G1, 17A2, S22C0-610	PP				95		T	.20	--	--	.6
90	Unidentified Ranger Sales	Pine	Unknown at this time	AS		130				T	.83	--	--	--

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Ten-Year Reforestation Program

Year	District	L o c a t i o n		Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
		1/- Management, Geographic, and Capability Area			Site Prep	Plant	
		- Twp., Rge., Sec.					
81	Animas	G1, 33B0, H22G0-410 T39N,R9W, Sec. 26, 27		100			ES
81	Dolores	D, 53B0, H21D0-009 D, 53B0, S21D0-007 T40N,R16W, Sec. 19, 30 T40N,R17W, Sec. 25		115			PP
81	Dolores	F2, 55B0, H21C0-004 D, 55D0, 421D0-005 D, 55D0, S32D0-000 D, 55B0, H21D0-004 D, 55B0, H22D0-000 T42N,R16W, Sec. 31 T42N,R17W, Sec. 36 T41N,R16W, Sec. 6, 7, 18 T41N,R17W, Sec. 1, 12		769			PP
81	Mancos	D, 41D0, S21G0-204 D, 41D0, S21G0-205 T37N,R12W, Sec. 35		190			PP
81	Pagosa	F, 05B0, S22D0-832 A, 03A0, H22D0-808 T33N,R1W, Sec. 1, 2 T33N,R1E, Sec. 7		233			PP
81	Pine	B, 23B1, I22G0-608 B, 23B1, I32G0-606 B, 23B1, M32GL-600 B, 23B1, I32G0-604 T37N,R7W, Sec. 10, 15, 16, 20, 21, 22		390			ES

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Ten-Year Reforestation Program (Continued)

Year	District	Location 1/- Management, Geographic, and Capability Area - Twp., Rge., Sec.	Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
				Site Prep	Plant	
82	Dolores	D, 47D1, H21GO-019 D, 47D1, H21GO-024	200			ES
82	Dolores	B, 55B0, S32DO-000 B, 55C0, H22DO-001 B, 55C0, S31EO-001 B, 53B0, H21DO-003 D, 55B0, H22DO-000 T41N,R16W, Sec. 7, 16-22, 27-33	1563			PP
82	Dolores	B, 51C2, H21DO-003 B, 51C2, H22DO-003 D, 51C1, H21DO-034 D, 51C1, H21DO-039 D, 45A0, H21DO-038 T39N,R14W, Sec. 14, 15, 23, 26, 35	356			PP
83	Animas	D, 29D0, H52GO-409 D, 29D0, H32GO-408 T39N,R9W, Sec. 2, 3, 10, 11 T40N,R9W, Sec. 21, 22, 27, 28, 34	200			ES
83	Animas	D, 33D0, H32GO-419 T38N,R8W, Sec. 23, 24, 25, 26	104			

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Ten-Year Reforestation Program (Continued)

Year	District	Location 1/- Management, Geographic, and Capability Area - Twp., Rge., Sec.	Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
				Site Prep	Plant	
83	Dolores	D, 47B2, H21GO-007 D, 47F2, H21GO-008 D, 47D1, H21GO-003 G1, 47D1, H51FO-000 G1, 47D1, H52GO-004 G1, 47D1, H21GO-006 T39N,R12W, Sec. 1, 2, 3, 4, 9, 10, 11, 15, 16, 22, 28	597			ES
83	Dolores	D, 53B0, H21D0-003 B, 53D0, H21D0-008 T40N,R16W, Sec. 5, 6 T40N,R17W, Sec. 1	350			PP
83	Dolores	D, 51D0, H21D0-037 D, 45A0, H21D0-038 T38N,R14W, Sec. 16- 20, 36 T37N,R14W, Sec. 6 T37N,R15W, Sec. 1	387			PP
83	Dolores	D, 51D0, H22D0-002 D, 51D0, H21D0-037 E, 51D0, H21CO-010 F2, 51D0, S22D0-007 T38N,R15W, Sec. 2, 3, 10, 11, 14, 23, 26	449			PP
83	Dolores	F2, 55B0, H21CO-004 B, 55B0, H21D0-005 T42N,R16W, Sec. 31 T42N,R17W, Sec. 36 T41N,R17W, Sec. 1	317			PP

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Ten-Year Reforestation Program (Continued)

Year	District	L o c a t i o n		Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
		1/- Management, Geographic, and Capability Area	- Twp., Rge., Sec.		Site Prep	Plant	
83	Dolores	F1, 53E2, H21D0-019 B, 51A2, H21D0-020 B, 51A1, H21D0-028 T39N,R15W, Sec. 18, 19		322			PP
83	Mancos	D, 45D0, S21G0-200 T38N,R12W, Sec. 25, 26, 36		196			ES
83	Pagosa	E, 03B0, S23D0-817 T33N,R1E, Sec. 32		50			PP
83	Pagosa	F2, 07A0, H21D0-807 T34N,R2W, Sec. 18, 19		65			PP
83	Pagosa	J, 09I0, M21G0-800 T37N,R2E, Sec. 6		35			ES
83	Pine	B, 23B1, I22G0-608 B, 23B1, I22G0-611 T37N,R7W, Sec. 10, 15, 14		138			ES
83	Pine	D, 19B0, H32G0-608 D, 19B0, M22G0-600 D, 19B0, H22F0-609 T37N,R6W, Sec. 10, 11, 14, 15		177			ES
83	Pine	F, 17B1, S22A0-603 T34N (Ute),R6W, Sec. 8, 9, 16		57			PP

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Ten-Year Reforestation Program (Continued)

Year	District	L o c a t i o n		Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
		1/- Management, Geographic, and Capability Area	- Twp., Rge., Sec.		Site Prep	Plant	
84	Animas	D, 29D0, H52G0-409 T39N,R9W, Sec. 2, 3		59			ES
84	Animas	D, 35H2, H22G0-403 T39N,R9W, Sec. 6, 7, 8		334			ES
84	Animas	D, 35G2, H32G0-403 T39N, R10W, Sec. 10, 11, 14, 15		99			ES
84	Animas	J, 35G2, H22G0-400 H22G0-402 T39N,R9W, Sec. 6 T40N,R9W, Sec. 29, 30, 31		154			ES
84	Dolores	D, 49D0, I22G0-000 D, 49D0, I31G0-001 T41N,R12W, Sec. 14, 15, 16, 17, 21, 22, 28		380			ES
84	Dolores	B, 47F1, H31G0-003 T38N,R11W, Sec. 17, 18		100			ES
84	Dolores	D, 47E1, H21G0-020 T38N,R11W, Sec. 27, 28		100			ES
84	Dolores	D, 53E1, 421D0-013 D, 53E2, H21D0-017 T39N,R16W, Sec. 15, 22, 23		658			PP

1/ The Management Area is indicated by a letter or letter and number (example: D, G1). This is followed by a four character identification of the Geographic Area (example: 33D0). The Capability Areas are designated by nine characters (example: H21G0-414).

Ten-Year Reforestation Program (Continued)

Year	District	Location 1/- Management, Geographic, and Capability Area - Twp., Rge., Sec.	Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
				Site Prep	Plant	
84	Mancos	G2, 41D0, S21G0-208 T36N,R12W, Sec. 1	72			PP
84	Mancos	D, 41D0, S22F0-200 T37N,R12W, Sec. 35	60			PP
84	Mancos	D, 41D0, I32GX-200 T37N,R11W, Sec. 30	58			PP
84	Pagosa	D, 13F3, H22G0-802 13H2, H22G0-803 T37N,R5W, Sec. 36	100			ES
84	Pine	D, 19B0, M22G0-600 D, 19B0, H32G0-608 D, 19B0, H22G0-605 D, 23C1, H22G0-606 T37N,R6W, Sec. 2, 3, 10, 11	335			ES
85	Animas	D, 35E0, H53G0-400 T37N,R10W, Sec. 16, 17, 20, 21	118			ES
85	Animas	G, 33A0, S32G0-404 T37N,R8W, Sec. 26-35	196			ES
85	Animas	D, 33D0, H32G0-419 D, 33D0, H22GX-401 T38N,R8W, Sec. 24, 25, 36	69			ES
85	Animas	D, 33D0, I22G0-401 T38N,R8W, Sec. 10, 11, 14	138			ES

1/ The Management Area is indicated by a letter or letter and number (example: D, G1). This is followed by a four character identification of the Geographic Area (example: 33D0). The Capability Areas are designated by nine characters (example: H21G0-414).

Ten-Year Reforestation Program (Continued)

Year	District	L o c a t i o n		Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
		1/- Management, Geographic, and Capability Area			Site Prep	Plant	
		- Twp., Rge., Sec.					
85	Animas	D, 23B2, H22GO-412 T37N,R8W, Sec. 1, 12, 13, 14		119			ES
85	Dolores	D, 47G1, H21GO-025 F2, 47G1, H51FO-018 F2, 47G1, H51GO-003 T38N,R11W, Sec. 1, 12, 13, 24		706			ES
85	Dolores	D, 47B2, H21GO-007 D, 47F2, H21GO-008 D, 47F1, H21GO-003 G1, 47F1, H51FO-000 D, 47C0, H21GO-028 D, 47C0, H52GO-004, D, 47C0, H21GO-006 T39N,R12W, Sec. 1, 2, 3, 4, 9, 10, 11, 15, 16, 22, 28		400			ES
85	Dolores	G1, 43A1, H52GO-006 G1, 43A1, H21GO-016 T39N,R10W, Sec. 16		112			ES
85	Mancos	D, 45D0, H21FO-204 T38N,R12W, Sec. 28,34		200			ES
85	Pagosa	D, 13H2, H22GO-803 T37N,R5W, Sec. 23		100			ES
85	Pine	D, 23C1, H22GO-606 D, 23C1, H32GO-605 T37N,R6W, Sec. 2, 3 T38N,R6W, Sec. 33, 34		371			ES

1/ The Management Area is indicated by a letter or letter and number (example: D, G1). This is followed by a four character identification of the Geographic Area (example: 33D0). The Capability Areas are designated by nine characters (example: H21GO-414).

Ten-Year Reforestation Program (Continued)

Year	District	Location 1/- Management, Geographic, and Capability Area - Twp., Rge., Sec.	Non-stocked Lands (Acres)	Reforestation Needs on Future Sale Areas (Acres)		Species
				Site Prep	Plant	
85	Pine	B, 17F2, S23D0-605 T35N,R6W, Sec. 36	10			PP
85	Pine	B, 13G1, H21G0-601 T36N,R5W, Sec. 20, 29	47			ES
86	Mancos	D, 47E0, S12G0-209 T37N,R11W, Sec. 5, 8	60			ES
86	Mancos	D, 45C0, H21D0-203 D, 45D0, H21D0-201 T37N,R14W		600	300 1991	PP
87	Mancos	D, 41C0, S21G0-206 T37N,R11W, Sec. 7, 8, 17, 18	222			SF
87	Mancos	F, 39B0, M22D0-202 T36N,R12W		300	(150) 1992	PP
88	No Reforestation Planned					
89	Dolores	D, 53B0, H21D0-002 B, 55A0, H21D0-001 T41N,R17W, Sec. 5, 6, 7 T42N,R17W, Sec. 30, 31		500	(250) 1994	PP
89	Mancos	F, 41D0, H21D0-210 F, 41E0, H21D0-214		350	175 1994	PP

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Ten-Year Reforestation Program (Continued)

Year	District	L o c a t i o n		Reforestation		Species
		1/- Management, Geographic, and Capability Area	Non-stocked Lands (Acres)	Needs on Future Sale Areas (Acres)		
				Site Prep	Plant	
90	Dolores	D, 53B0, H21D0-002 B, 53A0, H21D0-001 B, 53A0, H51D0-002 T41N,R17W, Sec. 4, 5, 8, 9 T42N,R17W, Sec. 32, 33		500	(250) 1995	PP
90	Mancos	D, 41C0, S21G0-206 D, 41C0, S21G0-202 T37N,R12W		700		ES
90	Pagosa	D, 13L0, H22D0-804 D, 13L0, H22F0-804 D, 13L0, H32F0-801 T35N,R3W, Sec. 3, 4, 9, 10, 16		900	450	PP
90	Pine	D, 13K1, H22G0-604 D, 13K1, H52G0-608 D, 13A2, S22D0-631 D, 13A2, H22F0-605 D, 13A2, H22G0-604 T35N,R3W, Sec. 18, 19, 30, 31, 32		867	434	PP
90	Pine	B, 13K1, H21G0-604 T35N,R4W, Sec. 23, 24, 25		50	50	DF

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APPENDIX C

TEN-YEAR ARTERIAL AND COLLECTOR
ROAD SUMMARY

Ten-Year Arterial And Collector Road Summary

Fiscal Year	Road Name	Road Number	Location Twp., Rge., Sec.	Termini	Length (Miles)	ROW Status	Proposed Development
81	East Vallecito	603	T36N,R6W, Sec. 18, 19; T36N,R7W, Sec. 13	Junction Road #600 to east side of Vallecito Dam	1.3	--	Upgrading, widening and paving
82	East Vallecito	603	T36N,R6W, Sec. 9, 16, 17, 19, 20	East side of Vallecito Dam to Pine Point Campground	3.5	--	Upgrading, widening and gravel surfacing
83	Hermosa Park	578	T39N,R9W, Sec. 23, 24	U.S. Highway #550 to Elbert Creek Road	1.5	--	Reconstruction Resurfacing
83	Turkey Springs	629	T34N,R3W, Sec. 2, 3 11	U.S. Highway #160 to junction of Road #628	2.9	Complex, Several Cases	Reconstruction
84	West Dolores	535	T39N,R14W, Sec. 24, 25, 26; T39N,R13W, Sec. 8, 9, 17, 18	Colorado Highway #145 to 5.8 miles north	5.8	--	Reconstruction
84	Pole Springs	364	T38N,R12W, Sec. 19, 20, 28, 30	Pole Springs Road #364	3.0	--	90% new construction
84	Missionary Ridge	682	T37N,R8W, Sec. 31, 32,	First switchback to switchback #13	5.0	--	Reconstruction Resurfacing
84	Pine River	602	T36N,R6W, Sec. 4, 9; T37N,R6W, Sec. 33	Middle Mountain Campground to pavement	2.5	--	Upgrading by widening and gravel surfacing
84	Florida	596	T37N,R7W, Sec. 30, 31	End of County Road to Forest boundary	2.0	--	Reconstruct, including gravel surfacing, drainage, double lane
84	Piedra	631	T36N,T37N,R3W, Sec. 2, 3, 9, 16, 21	South of Piedra River to 5 miles north	5.0	--	Reconstruction
84	Nipple Mtn.	665	T35N,R1E, Sec. 7, 8, 9, 10, 11, 13, 17, 18,	Junction Road #662 to 3.4 miles east	6.0	--	Reconstruction
85	West Dolores	535	T39N,R13W, Sec. 2, 3, 9, 10; T40N,R13W, Sec. 13, 24, 26, 35	5.8 miles north of Colorado Highway #145 to 11.8 miles north	6.0	2 cases	Reconstruction
85	Junction Creek	543	T36N,R10W, Sec. 36	Forest boundary to campground	1.5	--	Reconstruction Resurfacing-Paving
85	Plumtaw/ Fourmile	645 634	T35N,T36N,R2W, Sec. 1, 5, 8, 9, 12, 10, 14, 15, 16, 17, 23, 26, 36	U.S. Highway #160 to 14 miles north	14.0	--	Reconstruction
85	Buckles Lake	663	T33N,R1E, Sec. 2, 11, 14, 15, 21, 22, 27	U.S. Highway #84 to 4.5 miles north	4.5	--	Reconstruction
86	West Dolores	535	T40N,R11W, Sec 6; T40N,R12W, Sec. 1, 2, 10, 11, 15, 16, 17, 18; T40N,R13W, Sec. 13; T41N,R11W. Sec. 32, 33	11.8 miles north of Colorado Highway #145 to Dunton	6.3	--	Reconstruction
86	Ground Hog	533	T41N,R13W, Sec. 23, 25, 27	Reservoir to Forest boundary	3.0	1 case	Reconstruction

Ten-Year Arterial And Collector Road Summary (Cont.)

Fiscal Year	Road Name	Road Number	Location Twp., Rge., Sec.	Termini	Length (Miles)	ROW Status	Proposed Development
86	Cottonwood	532	T39N,R13W, Sec. 5, 6, 8; T39N,R14W, Sec. 2, 3, 9, 10; T40N,R14W., Sec. 35, 36	Road #535 to Road #526	8.0	--	Reconstruction
86	Stoner Mesa	686	T40N,R13W, Sec. 24, 25, 26; T40N,R12W, Sec. 19, 20, 21, 28, 29, 30	Intermittent, Road #535 to dead end	5.4	--	Reconstruction
86	Divide	564	T38N,R11W, Sec. 1, 12	Mile 3 to mile 4	1.0	--	Reconstruction
86	Hillside Drive	436	T38N,R12W, Sec. 10, 11, 13, 14, 24; T38N, R11W., Sec. 19	Intermittent, mile post 6.0 to mile post 13	3.0	--	Reconstruction
86	Taylor Creek	545	T38N,R13W, Sec. 1, 2, 11; T39N,R12W, Sec. 20, 29, 31, 32	Colorado Highway #145 to County line	7.0	--	Reconstruction
86	West Dolores	535	T40N,R11W, Sec. 22, 23, 24, 25, 27	Burro Bridge to meadows	3.0	1 case	Reconstruction
86	Hogback	566	T37N,R12W, Sec. 24, 25, 36	SW¼ of Sec. 24 to 2.0 miles southeast	2.0	--	Reconstruction w/surfacing
86	Missionary Ridge	682	T38N,R8W, Sec. 3, 10, 14, 15	Tank Creek to Grass- hopper	5.0	--	Construction Reconstruction Surfacing
86	Piedra	631	T35N,R2W, Sec. 6; T36N,R2W, Sec. 31; T36N,R2½W, Sec. 23, 24, 25, 36	Job Corps to 3.8 miles northwest	3.8	--	Reconstruction
86	Monument Park-East	630	T35N,R3W, Sec. 1, 2, 3, 4, 12	Junction Road #629 to 7.8 miles west	7.8	--	Reconstruction
87	West Mancos (Windy Gap)	561	T38N,R12W, Sec. 36; T37N,R12W, Sec. 1; T37N,R11W, Sec. 5, 6, 8	Gold Run Trail to Windy Gap	4.0	--	Reconstruction
87	Missionary Ridge	682	T38N,R8W, Sec. 16, 21, 22, 27, 28, 34	Canyon Creek to Tank Creek	5.0	--	Reconstruction Surfacing
87	Williams Creek	640	T38N,R3W, Sec. 18, 19, 30, 31	Junction Road #631 to 3 miles north	3.0	--	Reconstruction
87	Castle Creek	660	T34N,T35N,R2E, Sec. 3, 5, 6, 7, 33, 34	Forest boundary to end of present road	6.0	--	Reconstruction
87	Poison Park	644	T38N,R3W,R4W, Sec. 7, 13, 18	Junction Road #640 to 2 miles west	2.0	--	Reconstruction
88	Red Arrow	567	T36N,R12W, Sec. 8, 9, 10, 11, 17, 18, 19	Schubert Flat	6.3	--	Reconstruction
88	Cascade Divide	579	T39N,R9W, Sec. 3, 10, 11	Pando Creek	4.0	--	Reconstruction Surfacing
88	Piedra	631	T38N,R4W, Sec. 26, 27, 28, 34, 35, 36	Weminuche Creek to 5.0 miles west	5.0	--	Reconstruction

Ten-Year Arterial And Collector Road Summary (Cont.)

Fiscal Year	Road Name	Road Number	Location Twp., Rge., Sec.	Termini	Length (Miles)	ROW Status	Proposed Development
89	Millwood	559	T37N,R12W, Sec. 7; T37N, R13W, Sec. 12, 13, 14, 15, 16, 21	Turkey Creek Road	5.5	1 case	Reconstruction
89	Cascade Divide	579	T40N,R9W, Sec. 22, 27, 28, 34	Pando Creek to Graysill Creek	3.0	--	Reconstruction Surfacing
90	Rock Springs	556	T38N,R13W, Sec. 13, 22, 23, 24, 25, 27, 28	Junction Road #364 to Road #560	5.9	--	Reconstruction w/surfacing
90	Relay Creek	580	T40N,R9W, Sec. 29, 30, 31, 32; T39N,R9W, Sec. 6	Black Canyon to Hermosa Creek	3.5	--	Construction Surfacing
90	East Florida	597	T37N,R7W, Sec. 19, 20, 21	Junction of Road #596 to 5.73 miles above	5.73	--	Reconstruct, in- cluding gravel surfacing, drain- age, double lane
90	First Fork/ Monument Park-West	622 630	T34N,T35N,R4W, Sec. 3, 5, 8, 9, 10, 16, 17, 20, 29, 32	U.S. Highway #160 up Road #622, up Road #630 to end of road	12.0	--	Reconstruction

Ten-Year Local Roads Needing Capital Investment Work Summary

Fiscal Year	Road Name	Road Number	Location Twp., Rge., Sec.	Termini	Length (Miles)	ROW Status	Proposed Development
83	Fourmile	645	T36N,R2W, Sec. 3, 10	Road #645 to 2 miles north	2.0	--	Reconstruction
83	Fall Cr.	039	T37N,R1E, Sec. 3, 10	U.S. Highway #160 to 2 miles southeast	2.0	--	Reconstruction
84	Mavreeso	689	T40N,R14W, Sec. 36; T40N,R13W, Sec. 29, 30	Road #532 to dead end	1.5	--	Construction
85	Lizard Head	424	T41N,R10W, Sec. 22, 23	Colorado Highway #145 to wilderness boundary	2.0	--	Reconstruction
85	Boggy Draw	527	T39N,R14W, Sec. 34	Isolated portion of Road #527	0.1	--	Reconstruction
86-90	Lizard Head VIS	--	T41N,R9W, Sec. 18	VIS site	0.1	--	Reconstruction
86	Caviness Mountain	353	T36N,R12W, Sec. 21, 22, 23, 24, 29, 32	About 1 mile beyond radio tower road	6.4	--	5.1 Reconstruction 1.3 Construction
88	Sand Creek Bench	642	T37N,T38N,R4W, Sec. 28, 27, 33, 34, 9, 4	Road #631 to 2.5 miles south	2.5	--	Reconstruction
89	Fourmile	645	T37N,R2W Sec. 26, 35	From 3 miles north of Road #645 to end of road	2.5	--	Reconstruction
89	La Plata Canyon-F	571-F	T35N,R11W Sec. 3 T36N,R11W, Sec. 35,36	Road #571 to near Sawmill Canyon	5.15	1 case	Construction
90	Glade Canyon	509	T41N,R16W, Sec. 30; T41N,R17W, Sec. 23, 25, 26	Road #504 to 3.1 miles west	3.1	--	Reconstruction

APPENDIX D

TEN-YEAR TRAIL CONSTRUCTION AND
RECONSTRUCTION SUMMARY

Ten-Year Trail Construction And Reconstruction Summary

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
82	Mancos	Highline National Recreation	520	T.37N., R.11W.	Kennebec Pass-Bear Creek to Grindstone	5.0	-	Reconstruction Trailhead reconst. top Kennebec Pass
83	Animas	Purgatory	511	T.39N., R.8W., S.30, and 31	From Purgatory Flats to Animas River	1.5	-	New construction
83	Animas	Continental Divide	8138	T.41N., R.6W., S.20, 29, and 32 T.40N., R.6W., S.5, 8, 17, and 20	From Stony Pass to Eldorado Lake	7.0	-	New construction and reconstruction
83	Animas	Engineer Mtn.	508	T.39N., R.9W., S.1 and 12 T.40N., R.8W., S.14, 19, 30, and 31 T.40N., R.9W., S.13 and 24	From U.S. Highway 550 to Rico-Silverton Trail	8.0	-	Reconstruction
83	Pine	Columbine Pass	504	T.38N., R.6W., S.4 and 5	From 1 mile above junction with Trail #529 to 2 miles above junction with Trail #529	1.0	-	Relocate trail to better grade and drainage
83	Pine	Pine River	523	T.37N., R.5W., S.8, 9, and 17	From Lost Canyon to junction Trail #528	2.0	-	Reconstruction
83	Pine	Pine River	523	T.38N., R.5W., S.27	Vicinity of Falls Creek	0.3	-	Reconstruction
83	Pine	Pine River	523	T.38N., R.5W., S.14	Flag Mountain area to junction Trail #527	1.0	-	Reconstruction
83	Pine	Vallecito	529	T.37N., R.6W., S.4, 9 and 16	Junction Road #706 to Twin Bridge area	3.0	-	Reconstruction
83	Pine	Vallecito	529	T.38N., R.6W., S.28	That portion of trail in Section 28	1.0	-	Reconstruction
83	Pine	Vallecito	529	T.38N., R.6W., S.15, and 22	Second Creek Bridge to Dead Horse Creek	1.0	-	Reconstruction
83	Pine	Vallecito	529	T.38N., R.6W., S.4	From 0.5 miles below junction Trail #504 to junction of Trail #504	0.5	-	Reconstruction
83	Pine	Vallecito	529	T.39N., R.6W., S.14 and 21	Sunlight Creek to junction Trail #655	2.0	-	Reconstruction
83	Pine	Vallecito	529	T.39N., R.6W., S.3, 4 and 10	Junction Trail #655 to Stormy Gulch - segments of this area	1.0	-	Reconstruction
83	Pine	Vallecito	529	T.39N., R.6W., S.4 T.40N., R.6W., S.33 and 34	Stormy Gulch to above Nebo Creek	1.5	-	Reconstruction
84	Dolores Mancos	Navajo Lake Bear Creek	6352 607	T.41N., R.11W., S.2 T.38N., R.12W.	Trailhead to Navajo Lake Dolores River to 3 miles above	5.0 3.0	- -	Reconstruction Reconstruction Trailhead const.
84	Pagosa	Treasure Falls	563	T.37N., R.1E., S.16	Loop Trail, Colo. Highway #160 to Colo. Highway #160	1.0	-	Reconstruct Replace 1 bridge
84	Pagosa	Four Mile	569	T.37N., R.2W., S.2, 11, 12, 13, and 14	Road #645 to Four Mile Lake	5.2	-	Reconstruct

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
84	Pagosa	West Fork	561	T.37N., R.1W., S.1	N/A	.5	1 Case	Rehabilitate Burro Bridge and approaches Reconstruction
84	Pagosa	West Fork	561	T.38N., R.1W., S.25 and 26	N/A	1.0	1 Case	Reconstruction
84	Pagosa	Quartz Creek	571	T.36N., R.2E., S.3, 9, 14, 15, 16, 22, 23, and 26	Road #684 to Trail #572	8.0	-	Reconstruction
84	Pagosa	Palisade Meadows	651	T.39N., R.2W., S.30 and 31	Trail #588 to Continental Divide	1.8	-	Reconstruction
84	Pagosa	Indian Cr. Cutoff	652	T.39N., R.2W., S.28 and 29	Trail #588 to Continental Divide	1.4	-	Reconstruction
84	Pagosa	Turkey Creek	580.2	T.37N., R.1W., S.16, 17, and 21	N/A - Spot Reconstruction	1.0	-	Reconst. through cliffs at wilderness boundary
84	Pagosa	Turkey Creek	580.3	T.37N., R.1W., S.5 and 6	N/A - Spot Reconstruction	1.0	-	Relocate and Reconst.
84	Pine	Rock Creek	655	T.39N., R.6W., S.14 and 23	Rock Creek Meadows Area	1.0	-	Corduroy tread
84	Pine	Transfer Park (Burnt Timber Cr.)	667	T.37N., R.7W., S.7, 18, and 19	From junction Road #13071 to 2 miles above junction of Road #13071	2.0	-	Reconstruction
84	Pine	Continental Divide (La Vaca Area)	564	T.40N., R.4W., S.31 and 32	From junction of Trail #523 at Weminuche Pass to 1.5 miles above junction.	1.5	-	Reconstruction
84	Pine	Emerald Lake	528	T.37N., R.5W., S.4 T.38N., R.5W., S.17, 20, 29, and 32	From junction of Trail #523 to upper end of Emerald Lake	6.0	-	Reconstruction
84	Animas	Rico-Silverton	507	T.40N., R.9W., S.1, 10, 12, 13, 14, 15, 19, 20, 21, 22, 29, and 30 T.41N., R.9W., S.25 and 36	From Bolam Pass to South Fork Mineral Creek	9.5	-	New construction and reconstruction
84	Animas	Elk Creek	503	T.40N., R.7W., S.16, 17, 21, 22, 23, and 24 T.40N., R.6W., S.19, 20, and 21	From Animas River to Continental Divide	8.2	-	Reconstruction
85	Animas	Columbine Pass	504	T.39N., R.8W., S.24 and 25 T.39N., R.7W., S.29, 30, 32, 33, 34, and 35	From Needleton to Columbine Pass	10.0	-	Reconstruction

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
85	Animas	Clear Creek	550	T.37N., R.10W., S.13, 14, 15, 16, 21, and 22 T.37N., R.9W., S.7, 8, and 18	From Good Hope Road to Hermosa Creek	5.5	-	Reconstruction and new construction
85	Animas	Corral Draw	521	T.39N., R.10W., S.21, 28, 33, and 34 T.38N., R.10W., S.2 and 3	From Highline Trail to Hermosa Creek	5.0	-	Reconstruction
85	Animas	Spud Lake	661	T.39N., R.8W.	From Lime Creek Road to Potato Lake	1.0	-	Reconstruction
85	Dolores	Navajo Lake	6352	T.41N., R.10W., S.1	Navajo Lake to Forest boundary	3.0	-	Reconstruction
85	Dolores	Calico	6491	T.38N., R.12W., S.3	Meadows out 2.0 miles	2.0	1 case	Reconstruction
85	Mancos	Bear Creek	607	T.38N., R.11W.	From 3 miles above Dolores River to Gold Run Trail	3.0	-	Reconstruction
85	Pagosa	Blanco River	573	T.35N., R.2E., S.4, 5, 8, 9, 16, 20, 21, and 29	Road #657 to Trail #572	8.0	-	Reconstruction
85	Pagosa	Coldwater	597(1)	T.37N., R.4W., S.18 and 19 T.37N., R.4½W., S.11, 12, and 13 T.37N., R.5W., S.13, and 24	Road #631 to County line	4.0	-	Construction/Re-construction
85	Pagosa	Continental Divide	813.1	T.37N., R.2E., S.13 and 24 T.37N., R.3E., S.19, 20, 21, 27, 28 and 34	Trail #567 to Elwood Pass	10.0	-	Reconstruction
85	Pine	Granite Lake	540	T.39N., R.4W., S.13 and 14	From junction Trail #523 to lake	0.5	-	Reconstruction
85	Pine	Divide Lake	539	T.39N., R.4W., S.19 and 20	From junction Trail #523 to District boundary	1.0	-	Reconstruction
85	Pine	Pine River	523	T.39N., R.4W., S.5, 7, 8, 18, and 19 T.39½N., R.4W., S.4 and 5	From Granite Peaks Guard Station to Weminuche Pass	6.7	-	Reconstruction
85	Pine	Endlich Mesa	534	T.40N., R.4W., S.32 T.38N., R.7W., S.14, 23, 24, 25, and 26	From Sheridan Mountain to City Reservoir. From Lake Marie to mesa	2.0	-	Relocation
86	Animas	Highline	520	T.37N., R.11W., S.1, 2, 11, 12, 13, 14, 23, and 24 T.38N., R.11W., S.1, 12, 13, 24, 25, 36 T.39N., R.10W., S.4, 9, 10, 15, 16, 20, 21, 29, and 31 T.40N., R.10W., S.23, 24, 26, 27, 28, and 32	From Kennebec Pass to Hermosa Park Road	18.7	-	Reconstruction

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
86-90	Dolores	Calico	6491	T.38N., R.12W., S.3	Mile Post 2.0 to Mile Post 6.0	4.0	-	Reconstruction
86-90	Dolores	Lizard Head	637	T.41N., R.10W., S.23	From Trail #424 to Forest boundary	6.0	-	Reconstruction
86-90	Dolores	Priest Gulch	6453	T.39N., R.12W., S.12	Priest Gulch Campground to Calico Trail	6.0	-	Reconstruction
86-90	Dolores	Bear Creek	6071	T.38N., R.12W., S.9	Colo. Highway #145 to District boundary	2.0	1 Case	Reconstruction
86-90	Dolores	Highline Trail	No #	T.40N., R.10W., S.26	Black Hawk Mountain to T.40N., R.10W., S.10	5.0	-	Reconstruction
86-90	Dolores	Horse Creek	626	T.40N., R.11W., S.20	Private land to Calico Trail	1.5	2 Cases	Reconstruction
86-90	Dolores	Burnett	641	T.39N., R.11W., S.3	T.40N., R.11W., S.32	2.5	2 Cases	Reconstruction
86-90	Dolores	Fish Creek	647	T.40N., R.12W., S.6	T.41N., R.12W., S.14	3.0	-	Reconstruction
86-90	Dolores	Kilpacker	No #	T.41N., R.11W., S.23	T.41N., R.11W., S.11	3.0	-	Reconstruction
86-90	Dolores	Ryman	735	T.39N., R.11W., S.22	T.39N., R.11W., S.25	3.0	-	Reconstruction
86-90	Dolores	Stoner Mesa	624	T.40N., R.12W., S.28	T.40N., R.11W., S.29	6.0	-	Reconstruction
86-90	Mancos	Little Bear	609	T.38N., R.11W.	Rough Canyon to Bear Creek	4.0	-	Reconstruction
86	Pagosa	Dead Man	590	T.38N., R.12W.	Trail #589 to Trail #580.1	3.0	-	New construction
86	Pagosa	Indian Creek	588(1)	T.38N., R.2W., S.10, 15, 22, 23, and 24 and 26	Trail #587 to Palisade Meadows	4.8	-	Reconstruction
86	Pagosa			T.39N., R.3W., S.25		3.5	-	Reconstruction
86	Pagosa			T.38N., R.3W., S.2, 3, and 4				
86	Pagosa	Hossick Lake	602	T.39N., R.4W., S.29	Trail #585 To Hossick Lake	.7	-	Reconstruction
86	Pagosa	Opal Lake Trail	660	T.34N., R.2E., S.5, 8, and 9	Opal Lake Road to Opal Lake	1.5	-	New Construction
86	Pagosa	Treasure Mountain	565	T.37N., R.1E., S.12, 13, 14, 23, 25, and 26	Road #667 to Continental Divide, Treasure Pass	9.0	-	Reconstruction
86	Pine	Flint Creek	527	T.37N., R.2E., S.7, 18, and 31	From junction Trail #523 to junction of Trail #564	10.0	-	Reconstruction
86	Pine	Continental Divide (La Vaca Portion)	564	T.38N., R.5W., S.4, 9, 10, 14, and 15	From 1.5 miles above junction Trail #523 to junction Trail #525	3.0	-	Reconstruction
86	Pine	Continental Divide (N. Fork of Pine Portion)	564	T.39N., R.5W., S.1, 2, and 11	From junction with Trail #523 to top of ridge	5.0	-	Reconstruction
86	Pine	Continental Divide (N. Fork of Pine Portion)	564	T.39N., R.4W., S.3, 4, and 5				
87	Animas	Salt Creek	559	T.38N., R.10W., S.7, 8, 15, 16, and 17	From Highline Trail to Hermosa Creek	5.4	-	Reconstruction
87	Mancos	West Mancos	621	T.37N., R.13W.	Road #561 to Trail #617	3.0	-	Reconstruction
87	Pagosa	Little Sand Creek	591	T.37N., R.4W., S.24 through to T.38N., R.4W., S.9, and 10	Trail #595 to Trail #584	11.0	-	Reconstruction

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
87	Pagosa	Little Blanco	572	T.36N., R.2E., S.28, 32, and 33	N/A - Spot Relocation	2.0	-	Relocate and construct
87	Pagosa	Coldwater	597(2)	T.35N., R.2E., S.5 T.36N., R.4W., S.5, 8, 17, 18, and 19	Trail #538 to County line	4.0	-	Reconstruction
87	Pine	First Fork	1596	T.36N., R.4W., S.19, 20, 28, and 29 T.36N., R.5W., S.13, 14, 15, 16, 17, 19, 20, and 24	From junction of Road #622 to junction of Road #135	9.0	-	Reconstruction
88	Mancos	West Mancos	621	T.37N., R.12W.	Trail #617 to Trail #526	3.0	-	Reconstruction
88	Pagosa	Leche Creek	576	T.34N., R.1E., S.12 T.34N., R.2E., S.7, 18, and 19	Thunderbird Lodge Road to Trail #575	4.0	-	Reconstruction
88	Pagosa	Fish Lake Trail	574	T.35N., R.2E., S.23 and 24	N/A - Spot Relocation	1.5	-	Relocate and reconstruction
88	Pagosa	Hossick Creek	585	T.38N., R.4W., S.2 through to T.39N., R.3W., S.21	Trail #583 to Continental Divide	7.5	-	Reconstruction
88	Pagosa	E. Fork Weminuche Creek	659	T.39N., R.4W., S.14, 15, 21, 22, and 24	Trail #583 to Hossick Lake	5.0	-	Reconstruction
88	Pine	Endlich Mesa (Freeman Park to Red Creek Trail junction and east Florida Road Trail to Sheridan Mtn.)	534	T.36N., R.6W., S.6 T.36N., R.7W., S.1 T.37N., R.7W., S.23, 25, 36, and 1, 2, 11 T.38N., R.7W., S.25 and 35	From Freeman Park to junction of Trail #533 and from Florida Road Trail to Sheridan Mtn.	2.0	-	New Location & Construction
88	Pine	Rock Creek	655	T.39N., R.6W., S.23 T.40N., R.6W., S.14, and 15	From junction of Trail #523 to 2 miles above junction	10.0	-	Reconstruction
89	Animas	Carson Creek	544	T.37N., R.8W., S.4, 5, 7, 8, 18, and 19 T.38N., R.8W., S.33, and 34	From Baker Bridge Road to Missionary Ridge Road	8.6	2 Cases	Reconstruction
89	Animas	Big Bend	519	T.38N., R.10W., S.4, 5, 6, 10, and 11	From Highline Trail to Hermosa Creek	6.0	-	Reconstruction
89	Mancos	West Mancos	621	T.37N., R.12W.	Trail #526 to Trail #650	3.0	-	Reconstruction
89	Pagosa	Falls Creek	584	T.38N., R.4W., S.2, 3, 7, 8, 9, and 10	Trail #583 to Trail #524	5.0	-	Relocate 1 mile and reconstruction of 4 miles

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
89	Pagosa	Silver Creek	567	T.37N., R.2E., S.14, 22, 23, and 27	Road #667 to Continental Divide	5.0	-	Reconstruction
89	Pagosa	Lower Weminuche	595	T.36N., R.3W., S.6 and 8	Trail #596 to Trail #591	3.5	-	Reconstruction
89	Pagosa	West Fork	561	T.37N., R.4W., S.24	N/A - Spot Reconstruction	6.0	-	Relocate switch-backs. Reconstruct
89	Pine	Transfer Park-City Reservoir (Burnt Timber)	667 & 542	T.38N., R.1W., S.5, 6, 9, 22 and 23 T.37N., R.7W., S.5, 6, and 7 T.38N., R.7W., S.20, 21, 22, 23, 29, 31, and 32	From 2 miles above junction Road #13071 to City Reservoir	8.0	-	Reconstruction
89	Pine	Endlich Mesa	534	T.38N., R.7W., S.2, 11, and 14	From Mesa above Lake Marie to junction with Trail #504 @ Columbine Pass	3.0	-	Reconstruction
90	Animas	Cascade	510	T.40N., R.9W., S.10, 15, 22, 27, 34, and 35	From Cascade Road to Rico Silverton Trail	5.4	-	Reconstruction
90	Animas	Engine Creek	657	T.39N., R.9W., S.2	From Cascade Trail to Engineer Mountain Trail	4.5	-	Reconstruction
90	Animas	Dutch Creek	516	T.40N., R.9W., S.13, 23, 24, 26, and 27 T.38N., R.9W., S.4, 5, 9, 10, 15, 22, 27, 28, and 33 T.37N., R.9W., S.4, 5, and 8	From Little Elk Trail to Hermosa Creek	11.0	-	Reconstruction
90	Animas	Canyon Creek	545	T.37N., R.8W., S.5 T.38N., R.8W., S.28, 32, and 33	From Carson Creek Trail to Missionary Ridge Road	5.2	1 Case	Reconstruction
90	Animas	Highland Mary Lakes	606	T.41N., R.7W., S.25, and 36	From Cunningham Road to lakes	4.0	1 Case (BLM)	Reconstruction
90	Animas	Sharkstooth	622	T.41N., R.6W., S.31	From Kennebec Pass to Champion Road	2.8	-	Reconstruction
90	Mancos	Owen Basin	746	T.37N., R.12W. T.37N., R.11W.	Trail #650 to dead end	2.5	-	Reconstruction
90	Pagosa	Middle Fork	589	T.38N., R.4W., S.23 through to T.38N., R.3W., S.2	Road #636 to Continental Divide	10.0	-	Reconstruction
90	Pagosa	Windy Pass	566	T.37N., R.1E., S.16, 21, 22, and 23	Highway #160 to Trail #565	3.0	-	Reconstruction

Ten-Year Trail Construction And Reconstruction Summary (Cont.)

Fiscal Year	District	Trail Name	Trail Number	Location Twp., Rge., Sec.	Termini	Length	ROW Status	Proposed Development
90	Pagosa	Beaver Creek	560	T.38N., R.1W., S.24 and 25 T.38N., R.1E., S.4, 5, 8, 18, and 19	Trail #561 to Continental Divide	8.0	-	Reconstruction
90	Pine	Emerald Lake	528	T.38N., R.5W., S.6, 7, and 18 T.39N., R.5W., S.31 T.39N., R.6W., S.36	From upper end of Emerald Lake to Moon Lake	4.0	-	Reconstruction
90	Pine	East Creek	535	T.36N., R.6W., S.1, 2, 9, 10, and 11 T.37N., R.5W., S.28, 29, 31, and 32	From junction Road #603 to 10 miles above junction	10.0	1 Case	Reconstruction

APPENDIX E

PROPOSED MINERALS WITHDRAWALS AND REVOCATIONS

PROPOSED MINERALS WITHDRAWALS AND REVOCATIONS

In response to a growing concern over the lack of statutory guidance on withdrawals, Congress established a comprehensive withdrawal procedure in Section 204 of the "Federal Land Policy and Management Act of 1976 (FLPMA)." The term "withdrawal" is defined in Section 103(j) of FLPMA to mean:

"withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program;..."

Congress also repealed the implied authority of the President to make withdrawals, under which the majority of our existing withdrawals were made. FLPMA grants the Secretary of Interior broad withdrawal authority, including the explicit authority to withdraw land from the operation of the mining and mineral leasing laws. FLPMA also directs the Secretary of Interior to review all existing withdrawals within fifteen (15) years (or by 1991) to determine if they should be continued, modified, or revoked.

The San Juan National Forest's existing withdrawals were originally made over the years to protect campgrounds, picnic grounds, ranger stations, fire lookout sites, archaeological areas, travel influence zones, rest stop sites, observation sites, research natural areas, and other sites. Some of these sites were never built and some have been dismantled, rehabilitated, and returned to the Forest land base.

Detailed reviews of all Forest Service withdrawals on the Forest will be conducted in Fiscal Years 1984 and 1985. Appropriate recommendations for the continuance, modification, or revocation of the existing withdrawals, as well as new withdrawals, will be made to the Bureau of Land Management. The review schedule, prepared in accordance with review criteria established by Bureau of Land Management Regulations and the U.S.F.S. Regional Office Working Tool Policy Memo dated December 17, 1979, follows.

Existing Withdrawals with Improvements Proposed for Continuance or Modification Review in FY 1984

Name	Location	Acres	Public Land Order #
Square Top Administrative Site	T35N. R1E.	110	Sec. of Int. 6/11/08
East Fork Campground	T36N. R1E.	80	1494

Existing Withdrawals with Improvements Proposed for Continuance or
Modification Review in FY 1984 (Continued)

Name	Location	Acres	Public Land Order #
East Fork Campground	T36N. R1E.	40	2553
San Juan Overlook	T37N. R1E.	40	3051
Treasure Falls Rest Stop	T37N. R1E.	40	3051
West Fork Campground	T37N. R1E.	110	1494
Wolf Creek Campground	T37N. R1E.	40	1510
Wolf Creek Campground Enlargement	T37N. R1E.	60	2314
Silver Falls Guard Station Administrative Site	T37N. R2E.	70	1494
Eight Mile Mesa Lookout Administrative Site	T34N. R1W.	20	1494
Treasure Guard Station Administrative Site	T36N. R1W.	120	1494
Turkey Springs Guard Station Administrative Site	T35N. R3W.	50	Sec. of Int. 1/9/1890
Bridge Administrative Site	T37N. R3W.	110	Sec. of Int. 5/16/08
Bridge Campground Site	T37N. R3W.	320	1943
Piedra Campground and Guard Station	T37N. R3W.	160	1510
Cimarron Campground	T38N. R3W.	160	2553
Teal Picnic Ground	T38N. R3W.	160	3051
Williams Creek Campground	T38N. R3W.	80	1494
Williams Creek Campground Addition	T38N. R3W.	169	3051
Williams Lake Recreation Area	T38N. R3W.	201	2314

Existing Withdrawals with Improvements Proposed for Continuance or
Modification Review in FY 1984 (Continued)

Name	Location	Acres	Public Land Order #
Chimney Rock Lookout Administrative Site	South of Ute Line T34N. R4W.	90	1494
Chimney Rock Archeological Area	South of Ute Line T34N. R4W.	1350	4819
Lower Piedra Campground	North of Ute Line T34N. R4W.	120	1494
Devil Mountain Lookout Administrative Site	T35N. R4W.	20	3051
First Fork Campground	T36N. R4W.	90	2553
First Fork Campground Addition	T36N. R4W.	80	3051
Granite Peaks Guard Station Administrative Site	T39N. R4W.	160	1494
Yellow Jacket Guard Station Administrative Site	North of Ute Line T34N. R5W.	151	1494
Graham Creek Campground Site	T36N. R6W.	200	1873
North Canyon Campground	T36N. R6W.	240	1873
Old Timers Campground Site	T36N. R6W.	160	1873
Pine Point Campground Site	T36N. R6W.	200	1873
Vallecito Dam Area	T36N. R6W.	229	1873
Pine River Campground	T37N. R6W.	20	1510
Vallecito Campground	T37N. R6W.	320	1510
Vallecito Campground	T37N. R6W.	42	2314
Vallecito Guard Station	T37N. R6W.	68	1628
Transfer Park Campground	T37N. R7W.	120	1494

Existing Withdrawals with Improvements Proposed for Continuance or
Modification Review in FY 1984 (Continued)

Name	Location	Acres	Public Land Order #
Transfer Park Campground Addition	T37N. R7W.	120	4579
U. S. Highway 550 Travel Influence Zone	T37N. R8W., R9W. T38N. R9W. T39N. R8W., R9W. T40N. R8W.	4,382	C-21667
Andrews Lake Campground	T40N. R8W.	20	3051
Little Molas Lake Campground	T40N. R8W.	20	3051
South Mineral Campground	T41N. R8W.	29	2302
South Mineral Campground Addition	T41N. R8W.	9	3051
Animas Ranger Station Administrative Site	T36N. R9W.	200	1494
Haviland Lake Recreation Area	T38N. R9W.	160	2922
Columbine (Hamers Lake) Administrative Site	T39N. R9W.	65	Sec. of Int. 10/5/07
Columbine Ranger Station and Purgatory Campground	T39N. R9W.	53	2314
Sig Creek Campground	T39N. R9W.	20	1494
Lizard Head Pass Rest Stop	T41N. R9W., R10W.	120	2922
Junction Creek Picnic Ground	T36N. R10W.	60	2553
Junction Creek Picnic Ground Addition	T36N. R10W.	20	4579
Barlow Creek Campground	T41N. R10W.	240	2922
Cherry Creek Campground	T36N. R11W.	42	1510
Burro Bridge Campground	T41N. R11W.	70	1494

Existing Withdrawals with Improvements Proposed for Continuance or
Modification Review in FY 1984 (Continued)

Name	Location	Acres	Public Land Order #
Dunton Guard Station Administrative Site	T41N. R11W.	160	1494
Thompson Park Campground	T36N. R12W.	90	2553
Transfer Picnic Ground	T37N. R12W.	80	1494
Priest Gulch Campground	T38N. R12W.	20	1510
Emerson Campground	T39N. R13W.	97	1494
Mavreeso Campground	T39N. R13W.	70	1494
Mavreeso Campground Addition	T39N. R13W.	20	3051
West Dolores Campground	T39N. R13W.	60	1494
Forks Campground	T39N. R14W.	20	1510
Cottonwood Guard Station Administrative Site	T40N. R14W.	90	1494
Narraguinnep Research Natural Area	T39N. R17W. T40N. R16W., R17W.	2890	1960
Glade Guard Station Administrative Site	T41N. R16W.	60	1494
Dolores River Canyon Overlook Picnic Ground	T41N. R17W.	50	1494
Total 68		Acres 15,137	

Existing Withdrawals Proposed for Revocation or Modification Analysis in
FY 1985

Name	Location	Acres	Public Land Order #
Camp Creek Rest Stop	T37N. R1E.	40	3051
San Juan Administrative Site	T36N. R1W.	120	Sec. of Int. 5/5/08
San Juan Campground	T36N. R1W.	50	4579
Crystal Campground	T38N. R3W.	160	3051
Lake View Campground	T38N. R3W.	163	2922
Little Brook Campground	T38N. R3W.	160	2553
Snowshoe Campground	T38N. R3W.	160	2922
Devil Creek Camp and Picnic Ground	South of Ute Line T34N. R4W.	176	4579
Long Meadow Campground	T38N. R4W.	120	2922
Wickerson Mountain Campground	T35N. R6W.	40	3051
Aspen Point Picnic Ground	T36N. R6W.	227	1873
East Mountain Campground	T36N. R6W.	207	1873
Sawmill Point Boating Site	T36N. R6W.	240	1873
Wallace Lake Picnic Ground	T36N. R8W.	202	4579
Boyce Lake Campground	T39N. R8W., R9W.	140	3051
Columbine Campground	T39N. R9W.	10	1494
East Columbine Campground	T39N. R9W.	31	1494
East Hermosa Campground	T39N. R9W.	80	4579
Montelores Campground	T39N. R11W.	200	4579
Hay Camp Administrative Site	T38N. R14W.	40	Sec. of Int. 4/27/09
Total 20		Acres 2,566	

Proposed New Withdrawals

Name	Location	Acres
Williams Creek - White Fir Research Natural Area	T38N. R3W.	420
Remainder of designated Chimney Rock Archaeological Area	South of Ute line T34N. R4W.	1810
Total 2		Acres 2230

APPENDIX F

LANDS CAPABLE, AVAILABLE AND SUITABLE FOR TIMBER PRODUCTION AND INVENTORY SUMMARY FOR THE FOREST PLAN

LANDS CAPABLE, AVAILABLE AND SUITABLE FOR TIMBER
PRODUCTION AND INVENTORY SUMMARY FOR THE FOREST PLAN

This appendix summarizes the land classifications associated with the preferred alternative which were developed in Chapters III and IV of the draft EIS, summarizes the allowable sale quantity for the preferred alternative and presents a comparison with the 1976 Timber Management Plan. The following are used to display this information.

- Figure 1 is a graphic display of the land classification associated with the preferred alternative.
- Table 1 is a summary of the timberland use classification and inventory for the preferred alternative.
- Figure 2 is a graphic display of the allowable sale quantity, base sale schedule and long-term sustained yield.
- Table 2 displays the allowable sale quantity and annual Resources Planning Act (RPA) target.
- Table 3 compares the annual allowable sale quantity for Fiscal Years 1981 through 1990 with the programmed sale statement for Fiscal Year 1981.
- Table 4 compares the Forest Plan suitable acres by type and stand size class with the 1976 Timber Management Plan commercial forest acres.
- Table 5 is a summary of changes in timber resource inventory and management direction from the 1976 Timber Management Plan.
- Table 6 is a detailed comparison of inventory and management data with the 1976 Timber Management Plan.

The latest Forest Inventory (Stage I Survey) was completed in 1968. Both the 1976 Timber Management Plan and this Plan utilize per acre data from this inventory. The area of the Forest by vegetation type was recomputed, using remote sensing techniques, for this Plan.

It will be noted that there are occasionally large differences between the 1976 Timber Management Plan commercial forest acres and the suitable forest acres of this Plan. An example is the area of non-stocked lands. This Plan has determined that substantial parts of the non-stocked lands are not suited for timber production; this determination along with a revised acreage computation explains why the non-stocked areas of this Plan are four percent of the non-stocked commercial forest land of the previous Plan.

Some data elements are not available. In certain cases this is because the Forest Survey was not organized to provide this data. In some cases the areas reclassification for this Plan did not measure the data. The area reclassification for this Plan measured area by type and stand size class but did not measure area by productivity class. Where data is not available the tables are marked with N/A.

FIGURE I

Lands Suitable For Timber Production (Proposed Forest Plan)

Preferred Alternative

Acres

Total Forested Acres on the San Juan National Forest
(the total forested area accounts for 72 percent of
the total 1,867,782 acres on the San Juan National
Forest)

1,346,562

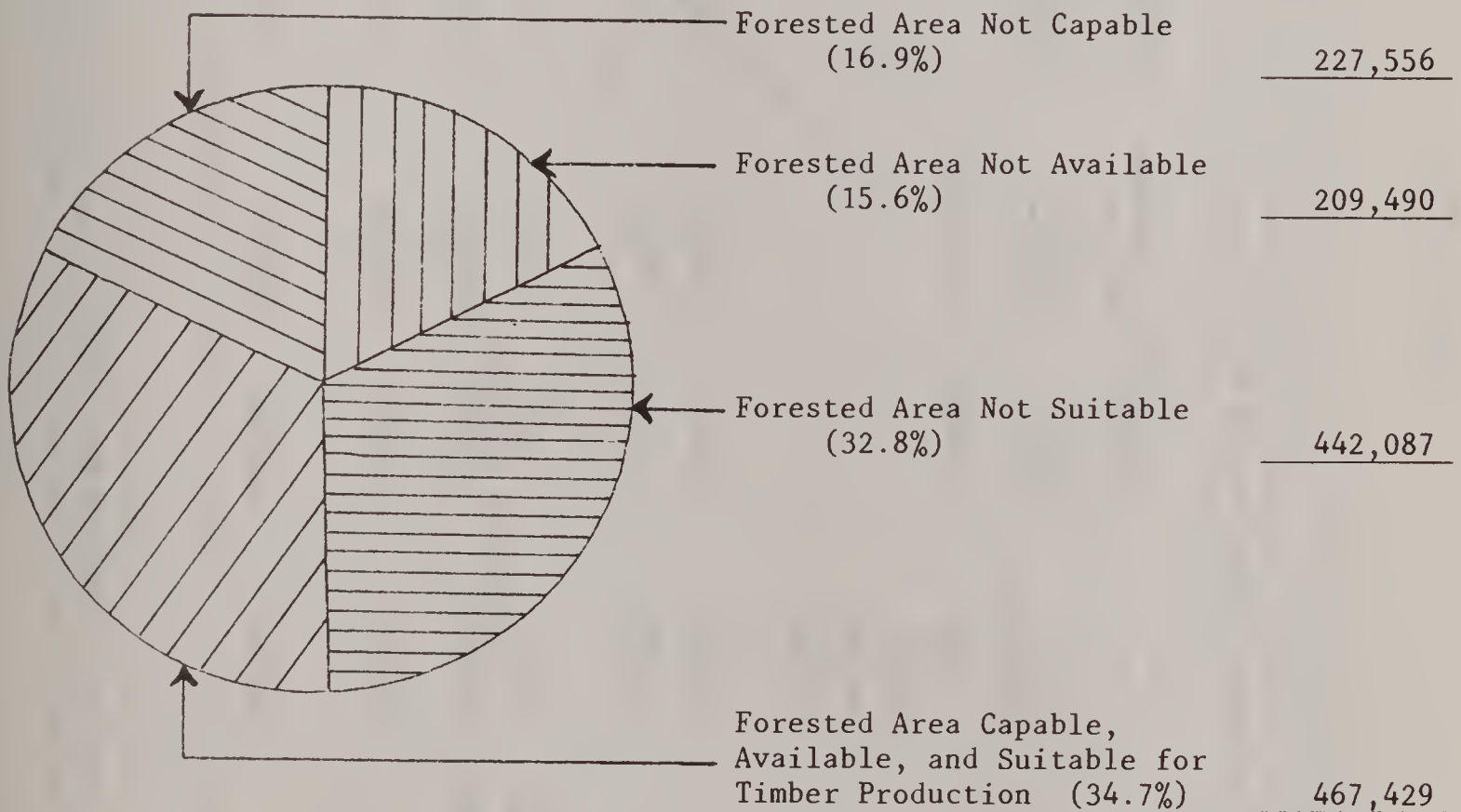


TABLE 1

Timberland Use Classification and Inventory Summary (San Juan National Forest)

	Areas	Volume		Total Annual Net Growth		Total Annual Mortality	
		All Products 5.0" + dbh Thousand Cunits	Large Roundwood local scale Million Board Feet	All Products 5.0" + dbh Thousand Cunits	Large Roundwood local scale Million Board Feet	All Products 5.0 + dbh Thousand Cunits	Large Roundwood local scale Million Board Feet
Water	2,252						
Non-Forest	518,968						
Forest Land	1,346,562						
A. Not Capable	227,566						
B. Not Available							
Productive Reserved	158,203	5,144.10	2,068.33	48.40	20.83	31.50	13.13
Productive Deferred	51,287	1,141.70	392.52	16.80	5.54	5.30	2.02
C. Not Suited for Timber Production							
Technologically Not Suited	85,911	459.35	162.14	7.57	3.05	0.56	0.22
Incompatible Preferred Uses	356,176	9,507.00	3,685.22	122.60	51.25	50.80	21.04
D. Suitable for Timber Production (CFL)	467,429	10,347.24	3,945.58	149.57	62.30	46.80	19.23
National Forest Total	1,867,782	26,599.39	10,253.79	344.94	142.97	134.96	55.64

FIGURE 2

Allowable Sale Quantity, Base Sale Schedule and Long-Term Sustained Yield

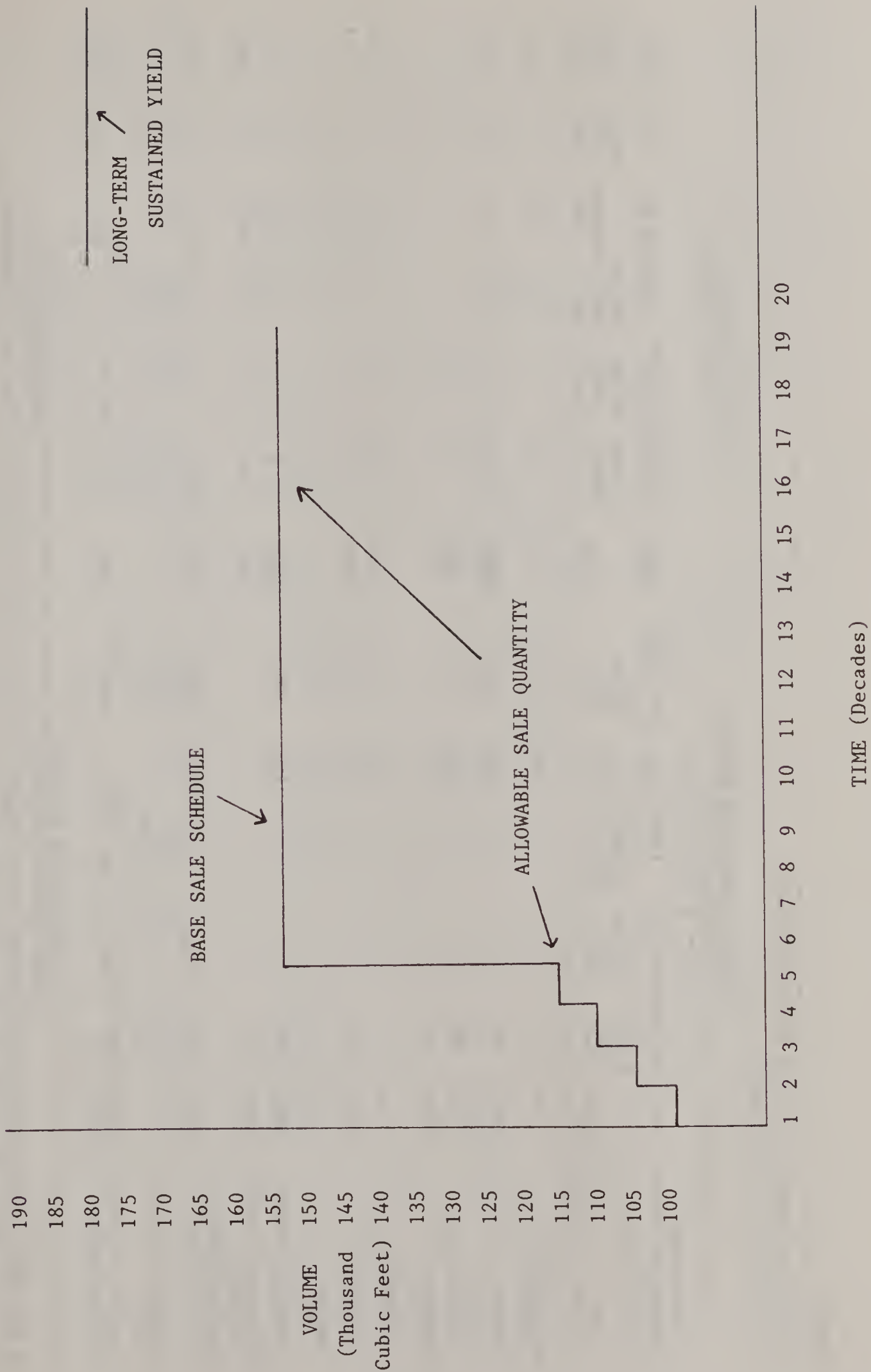


TABLE 2

Allowable Sale Quantity and Annual RPA Target Statement

Total Program Component and Activity	Periodic Allowable Sale Quantity (Effective FY 81-90; From 10-1-80 to 9-30-89)						Annual RPA Target 2/ (Effective FY 81-85)						
	Large Roundwood (ST)		Products 1/		Total Volume	Area	Large Roundwood (ST)		Products 1/		Total Volume		
	Million Board Feet	Million Cubic Feet	Million Cubic Feet	Thousand Cords	Million Cubic Feet		Million Board Feet	Million Cubic Feet	Thousand Cords	Million Cubic Feet	Million 3/ Board Feet		
	Acres					Acres							
Full Yield													
Clearcut	12850	84	19	2	25.0	21	2160	19.2	4.1	0.4	5.1	4.5	19.4
Seed Cut	16790	36	8	1	12.5	9	135	.5	.1	-	-	.1	.5
Selection	17320	28	6	1	12.5	7	-					-	
Intermediate	-	-	-										
Preparatory Cut	4920	28	6	1	12.5	7	720	4.2	.9	.1	1.2	1.0	4.8
Removal	-												
Commercial Thinning	39320	224	51	5	6.2	56	3310	10.3	2.2	.3	3.7	2.5	12.0
Sub Total-Full Yield	91200	400					6325	34.2	7.3	.8	10.0	8.1	39.2
Regulated Allowable Sale Quantity	91200	400	90	10	125.0	100	6325	34.3	7.3	.8	10.0	8.1	39.2
Salvage from Suitable Lands	-						-						
Total	91200	400	90	10	125.0	100	6325	34.2	7.3	.8	10.0	8.1	39.2

1/ Convertible products converted to thousand board feet at two cords per thousand for control purposes based on board feet.2/ RPA targets other than total million board feet are not assigned to the Forest. Other values shown are from the RPA Alternative E.3/ Includes Convertible Products.

TABLE 3

Annual Allowable Sale Quantity and Programmed Sale Statement

Total Program Component and Activity	Annual Allowable Sale Quantity (From 10-1-80 to 9-30-89)				Programmed Sale Statement (Fiscal Year 1981)					
	Large Roundwood (ST)		Products		Large Roundwood (ST)		Products		Total Volume	
	Area	Million Board Feet	Million Cubic Feet	Million Cubic Feet	Area	Million Board Feet	Million Cubic Feet	Million Cubic Feet	Million Board Feet	Million Cubic Feet
	Acres	Million Board Feet	Million Cubic Feet	Million Cubic Feet	Acres	Million Board Feet	Million Cubic Feet	Million Cubic Feet	Million Board Feet	Million Cubic Feet
Full Yield										
Clearcut	1285	8.4	1.9	.2	2500	2.1	400	0.4	2.0	0.1
Seed Cut	1679	3.6	0.8	.1	1250	0.9	-	-	-	-
Selection	1732	2.8	0.6	.1	1250	0.7	-	-	-	-
Preparatory Cut	492	2.8	0.6	.1	1250	0.7	8000	4.4	19.5	4.4
Removal	0	-	0	-	-	-	-	-	-	-
Commercial Thin	3932	22.4	5.1	.5	6250	5.6	3600	0.8	3.5	0.8
Sub-total - Full Yield	9120	40.0	9.0	1.0	12500	10.0	12000	5.6	25.0	5.7
Regulated Allowable Sale Quantity	9120	40.0	9.0	1.0	12500	10.0	9120	9.0	40.0	10
Salvage from Suitable Lands							4000	1.6	7.0	1.6
Total Allowable Sale Quantity	9120	40.0	9.00	1.2	12500	10.0	16000	7.2	32.0	7.3
Programmed from Non-Suitable (Non-chargeable) - None										

1/ Includes convertible products.

TABLE 4

Comparison Of Forest Plan Suitable Acres With 1976 Timber Management Plan

Type and Stand Size Class	1976 Timber Management Plan		Percent Change + or -
	Regulated Commercial Forest Acres	Forest Plan Suitable Acres	
Ponderosa pine			
Non-stocked	48,500	-0-	--
Seed-sap	--	-0-	--
Poletimber	--	-0-	--
Sawtimber	152,600	110,557	-28
Total	201,100	110,557	-45
Spruce-fir			
Non-stocked	10,400	7,363	-29
Seed-sap	12,200	14,189	+16
Poletimber	9,000	2,140	-76
Sawtimber	208,400	125,774	-40
Total	240,100	149,466	-38
Douglas-fir			
Non-stocked	4,900	1,152	-76
Seed-sap	1,800	393	-78
Poletimber	24,500	1,481	-94
Sawtimber	137,100	67,791	-50
Total	168,300	70,817	-58
Aspen			
Non-stocked	-0-	-0-	--
Seed-sap	4,000	18,970	+374
Poletimber	11,300	-0-	--
Sawtimber	7,400	117,618	+1489
Total	22,700	136,588	+502
Total All	632,100	467,428	-26

1/ This Plan combined aspen pole timber with the aspen sawtimber class.

TABLE 5

Summary of Changes in Timber Resource Inventory and Management Direction from the 1976 Timber Management Plan

Previous Plan		This Plan		Acres Change	
Area	Acres		Acres		
Net National Forest	1,850,300		1,867,782	+17,482	
All Forest Land	1,559,700		1,346,562	-213,138	
Productive Deferred	151,200		51,287	-99,913	
Productive Reserved	139,000		158,203	+19,203	
Commercial Forest	1,098,300	Productive Available	909,516	-198,784	
Standard	200,600	Suitable	467,428		
Special	12,100	Not Suitable	442,088		
Marginal	419,400				
Unregulated	466,200				
Volume - CFL	Total	Per Acre	Total	Per Acre	
Growing Stock	2160 MMCF	2000 CF	920 MMCF	2000 CF	-1240
Salvable Dead	17 MMCF	16 CF	7 MMCF	16 CF	-10
Total	2177 MMCF	2016 CF	927 MMCF	2016 CF	-1250
Old Growth Sawtimber	N/A 1/ MMBF		N/A MMBF		N/A
Other Sawtimber	7552 MMBF	11200 BF	4735 MMBF	11200 BF	-2817
Total	7552 MMBF		4735 MMBF		-2817
Growth/Mortality	(Regulated CFL)		(Suitable CFL)		
Growing Stock					
Annual Net Growth	17 MMCF	27 CF	13 MMCF	27 CF	-4
Annual Mortality	6 MMCF	9 CF	4 MMCF	9 CF	-2
Annual Gross Growth	23 MMCF	36 CF	17 MMCF	36 CF	-6
Allowable Sale Quantity/Potential Yield					
Sawtimber	27 MMCF	800 CF	9 MMCF	1000 CF	-18
Products	3 MMCF		1 MMCF	100 CF	-2
Total	20 MMCF		10 MMCF	1100 CF	-20
Sawtimber (Local)	117 MMBF	3300 BF	40 MMBF	4400 BF	

Plan Accomplishment - Average Annual Basis

	Planned Volume MMBF	Planned Acres	Accomplished Acres	Planned FY 81-90		RPA Target
				Volume MMBF	Acres	
Regeneration Harvest						*
Clearcut	5.5	400	380	8.2	1280	
Seed Cut				3.5	1680	
Selection				2.8	1730	
Intermediate						*
Preparatory Cut	5.0	1230		2.9	490	
Removal	1.8	360				
Commercial Thinning	18.8	8140	6630	22.6	3930	
Salvage						
Reforestation	Total Needs Acres			Total Needs Planned Acres		RPA
Backlog		4570	4200		852	4928 2/
Other		1700	120		2500	*

*RPA Target Not Assigned to Forest

1/ N/A = Not available data.

2/ From page 87 proposed Regional Plan.

TABLE 6

Detailed Comparison of Inventory and Management Data with 1976 Timber Management Plan (Previous Plan)

	Previous Plan (Acres)	This Plan (Acres)	Percent <u>1</u> / Change
Area Summary			
Net National Forest	1,850,300	1,867,782	+ 1
Total Forested Land	1,559,700	1,346,562	-14
Total Productive Forest Land	1,388,500	1,119,006 <u>2</u> / 3/	-19
Total Comm. Forest Land	1,098,300	887,385 <u>3</u> / 4/	-19
Total Non-Productive	171,200	227,556	+33
Total Non-Forest and Water	290,600	521,220	+79
Productive Forest Land Not Available			
Productive Reserved	139,000	158,203	+14
Productive Deferred	151,200	51,287	-66
Productive Admin. Withdrawal	-0-	-0-	
Commercial Forest Land			
Previous Plan		This Plan Suitable and Available Productive Forest Land	
	Acres	By Use Category	Acres
Standard	200,600	Travel Routes	30,933
Special (by Reason)	12,100	Range Management Emphasis	122,318
Water Influence	N/A <u>5</u> / N/A	Semi-primitive Motorized Recreation	29,530
Travel Influence		Wildlife Habitat Emphasis	8,318
		All other	276,329
Marginal (by Reason)			
Access - Road Development	153,200		
Logging Methods	220,500		
Markets	-0-		
Reforestation	45,700		
Unregulated	466,200		
Total	1,098,300		467,428
Productive Forest Land - Not Suited for Timber Production			
	Previous Plan (Acres)	This Plan (Acres)	Percent <u>1</u> / Change
Technologically Not Suited			
Regeneration	-0-	85,911	
Other Basis for Productive Forest Lands Not Suited for Timber Production			
Unregulated	466,200		
- By Reason			
Range Management	N/A	356,176	-23
Semi-primitive Motorized Recreation	N/A	25,066	
Semi-primitive Non-motorized Recreation	N/A	19,823	
Developed Winter Sports Areas	N/A	194,326	
Custodial Management	N/A	8,795	
Riparian Areas	N/A	83,004	
		25,162	
Timber Size Class			
	Commercial Forest Acres	Suitable Forest Acres	Percent Change <u>1</u> /
Sawtimber	672,600	421,740	-37
Poletimber	148,900	3,621	-98
Seed/Sapling	40,200	33,552	-16
Understocked	N/A	N/A	
Non-stocked	236,600	8,515	-96
Total	1,098,300	467,428	-57

TABLE 6 (Continued)

Detailed Comparison of Inventory and Management Data with 1976 Timber Management Plan (Previous Plan)

	Previous Plan (Acres) Commercial Forest Land		This Plan (Acres) Suitable Forest Land		Percent $\frac{1}{\text{Change}}$
Forest Type by Age Group	N/A		N/A		
Site Class (Based on Potential Annual Growth)					
20-50 Cubic feet/Acre/Year	623,100		N/A		
50-85	416,200		N/A		
85-120	59,000		N/A		
120+	-0-		N/A		
Total	1,098,300		N/A		
Total Area of Non-stocked	236,600		All Forest Land 103,984		-56
Area by Condition Class	N/A		N/A		
Area Put Under Management by Type			Area Planned This Period		
Douglas-fir	-0-		700		Not Comparable
Ponderosa pine	14,700		22,700		
Spruce-fir	11,800		54,900		
Aspen	1,500		12,800		
	Previous Plan on Commercial Forest Land		This Plan on Suitable Forest Land		Percent Change $\frac{1}{\text{Total Volume}}$
	Total Volume	Per Acre	Total Volume	Per Acre	
Volume Comparison					
Growing Stock (GS) MMBF	2160	.0020	920	.0020	-57
Salvable Dead MMBF	17	.0000+	7	.0000+	-58
TOTAL CUBIC VOLUME	2177	.0020	927	.0020	-57
Sawtimber GS. MMBF	1762	.0026	1105	.0026	-37
Sawtimber GS. MMBF Local	7552	.0112	4735	.0112	-37
Sawtimber GS. MMBF INT. $\frac{1}{2}$ "	8829	.0131	5536	.0131	-37
Growing Stock by Stand Size					
Sawtimber MMBF	1762	.0026	1105	.0026	-37
Poletimber MMBF	234	.0016	6	.0016	-97
Seedling/Sapling MMBF	29	.0007	24	.0007	-17
Understocked MMBF		N/A			
Old Growth Sawtimber MMBF (Local)		N/A			
Younger Sawtimber MMBF (Local)	7552	.0112	4735	.0112	-37
Sawtimber Growing Stock by Type					
Douglas-fir MMBF (Local)	1316	.0084	572	.0084	-56
Ponderosa pine MMBF (Local)	882	.0046	518	.0046	-41
Spruce-fir MMBF	4517	.0166	2092	.0166	-53
Aspen MMBF	400	.0070	827	.0070	+106
Does not add to total sawtimber volume due to rounding and averaging.					
Pole Timber Growing Stock by Type					
Douglas-fir MMBF	50	.0016	2	.0016	-96
Ponderosa MMBF	0	0	0	0	
Spruce-fir MMBF	18	.0014	3	.0014	-83
Aspen MMBF	165	.0016	0	.0016	

TABLE 6 (Continued)

Comparison of Inventory and Management Data with 1976 Timber Management Plan (Previous Plan)

	Previous Plan on Commercial Forest Land		This Plan on Suitable Forest Land		Percent Change ^{1/} Total Volume
	Total Volume	Per Acre	Total Volume	Per Acre	
Growth and Mortality on CFL					
Annual Net Growth MMCF	30	.0000+	13	.0000+	-57
Annual Mortality MMCF	10	.0000+	4	.0000+	-60
Annual Gross Growth MMCF	40	.0000+	17	.0000+	-57
Annual Growing Stock Growth By Stand Size					
Old Growth Sawtimber MMCF		N/A			
Younger Sawtimber MMCF	30	.0000+	19	.0000+	-36
Poletimber MMCF	7	.0000+	1	.0000+	-85
Seed/Sapling MMCF	1	.0000+	1	.0000+	
Sawtimber MMBF (Local)	136	.0002	85	.0002	-37
Annual Growing Stock Mortality by Stand Size					
Old Growth Sawtimber 150+ MMCF					
Young Growth Sawtimber					
Less than 150 MMCF	8	.0000+	5	.0000+	-37
Poletimber MMCF	1	.0000+	1	.0000+	
Seed/Saplings MMCF	1	.0000+	1	.0000+	
Sawtimber MMBF (Local)	47	.0000+	30	.0000+	-36
Annual Growth by Forest Type					
Douglas-fir MMCF	6	.0000+	2	.0000+	-66
Ponderosa MMCF	6	.0000+	2	.0000+	-66
Spruce-fir MMCF	18	.0000+	8	.0000+	-56
Aspen MMCF	8	.0000+	5	.0000+	-37
Annual Mortality by Forest Type					
Douglas-fir MMCF	2	.0000+	1	.0000+	-50
Ponderosa MMCF	1	.0000+	1	.0000+	
Spruce-fir MMCF	6	.0000+	3	.0000+	-50
Aspen MMCF	8	.0000+	5	.0000+	-37

^{1/} Percent Change from Previous Plan^{2/} Capable Forest Land^{3/} Available Productive Forest Land^{4/} Not Capable Forest Land^{5/} N/A = Not Available Data

APPENDIX G

ROADS AND TRAILS TO REMAIN OPEN TO
THE PUBLIC FOR MOTORIZED USE
WITHIN MANAGEMENT AREA H

ROADS AND TRAILS TO REMAIN OPEN TO THE PUBLIC FOR MOTORIZED USE
WITHIN MANAGEMENT AREA H

Management Area H is managed with emphasis on "Semi-primitive, Non-motorized" dispersed recreation opportunities. The following roads and trails will remain open to the public for motorized use as access corridor routes within the management area. These routes may be closed seasonally to prevent resource damage.

Road or Trail Name	Number	Termini
Hillside Drive Road	436	U.S. Highway #145 to dead end.
Calico Trail	649	Trailhead on U.S. Highway #145 to Road #535
Tenderfoot Trail	644	Trailhead on U.S. Highway #145 to Calico Peak Trail.
Bear Creek Trail	607	Dolores River to the Grindstone Trail.
Gold Run North Trail	618	Road #561 to Bear Creek Trail.
Grindstone Trail	608	Bear Creek Trail to Highline Trail.
Little Bear Creek Trail	658	Bear Creek Trail to Grindstone Trail.
Lower Hermosa Road	576	From private land, T.37N., R.9W., Sec. 34 to dead end.
Hermosa Trail	515	From Road #576 to Road #578.
East Fork Road	667	Forest Boundary to Elwood Pass.

APPENDIX H

STANDARD AND SPECIAL STIPULATIONS FOR MINERAL LEASING

STANDARD AND SPECIAL STIPULATIONS FOR MINERALS LEASING

The attached stipulations (Bureau of Land Management Form 3109-3: Stipulation For Lands Under Jurisdiction of Department of Agriculture, and Forest Service Region 2 Supplements) are designed to be attached to mineral leases, permits, and licenses, to ensure the protection of surface resources and values of National Forest System lands during and after mineral activities.

The following "standard" stipulations will be attached to all mineral leases, licenses, and permits issued for National Forest System lands:

- BLM Form 3109-3
- Forest Service R-2 Supplement D: Surface Disturbance Stipulation.

The following stipulations will be attached as appropriate to mineral leases, licenses, and permits issued for National Forest System lands:

- Forest Service R-2 Supplement A: Further Planning Area Stipulation
- Forest Service R-2 Supplement B: Classified Area Stipulation
- Forest Service R-2 Supplement C: Limited Surface Use Stipulation
- Forest Service R-2 Supplement E: Wild and Scenic Rivers System Stipulation
- Forest Service R-2 Supplement F: Surface Use Stipulation
- Forest Service R-2 Supplement G: Activity Coordination Stipulation
- Forest Service R-2 Supplement H: Conditional No Surface Disturbance Stipulation

The following stipulations will be attached as appropriate to all mineral leases and permits issued for wildernesses and Wilderness Study Areas:

- Forest Service R-2 Supplement R: Wilderness Oil, Gas, Geothermal Stipulation
- Forest Service R-2 Supplement S: Wilderness Movable Minerals Stipulation

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE *

The lands embraced in this lease or permit being under the jurisdiction of the Secretary of Agriculture, the lessee or permittee hereby agrees:

(1) To conduct all operations authorized by this lease or permit with due regard for good land management, not to cut or destroy timber without first obtaining permission from the authorized representative of the Secretary of Agriculture, and to pay for all such timber cut or destroyed at the rates prescribed by such representative; to avoid unnecessary damage to improvements, timber, crops, or other cover; unless otherwise authorized by the Secretary of Agriculture, not to drill any well, carry on operations, make excavations, construct tunnels, drill, or otherwise disturb the surface of the lands within 200 feet of any building standing on the lands and whenever required, in writing, by the authorized representative of the Secretary of Agriculture to fence or fill all sump holes, ditches, and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the lands to their former condition, including the removal of structures as and if required, and when required by such representative to bury all pipelines below plow depth.

(2) To do all in his power to prevent and suppress forest, brush, or grass fires on the lands and in their vicinity, and to require his employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the lessee or permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the lands at the disposal of any authorized officer of the Department of Agriculture for the purpose of fighting forest, brush, or grass fires on or originating on the lands or on adjacent areas or caused by the negligence of the lessee or permittee or his employees, contractors, subcontractors and employees of contractors and subcontractors, with the understanding that payment for such services shall be made at rates to be determined by the authorized representative of the Secretary of

Agriculture, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character: *Provided*, that if the lessee or permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors, caused or could have prevented the origin or spread of said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the authorized representative of the Secretary of Agriculture, the lessee or permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the area involved except at established camps, and shall enforce this prohibition by all means within his power: *Provided*, that the authorized representative of the Secretary of Agriculture may designate safe places where, after all inflammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee or permittee, smoking may be permitted.

The lessee or permittee shall not burn rubbish, trash, or other inflammable materials *except* with the consent of the authorized representative of the Secretary of Agriculture and shall not use explosives in such a manner as to scatter inflammable materials on the surface of the lands during the forest, brush, or grass fire season, *except* as authorized to do so or on areas approved by such representative.

The lessee or permittee shall build or construct such fire lines or do such clearing on the lands as the authorized representative of the Secretary of Agriculture decides is essential for forest, brush, and grass fire prevention which is or may be necessitated by the

* This form of stipulation may be used in connection with leases and permits issued under the Acts of February 25, 1920, as amended (30 U.S.C. 181 *et seq.*); August 7, 1947 (30 U.S.C. 351 *et seq.*); February 7, 1927, as amended (30 U.S.C. 281 *et seq.*); April 17, 1926, as

amended (30 U.S.C. 271 *et seq.*); June 28, 1944 (58 Stat. 483-485); September 1, 1949 (30 U.S.C. 192c), June 30, 1950 (16 U.S.C. 508b), or under the authority of any of the Acts cited in Section 402 of the President's Reorganization Plan No. 3 of 1946 (5 U.S.C. 133y-16, Note).

exercise of the privileges authorized by this lease or permit, and shall maintain such fire tools at his headquarters or at the appropriate location on the lands as are deemed necessary by such representative.

(3) In the location, design, construction, and maintenance of all authorized works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures or clearance, the lessee or permittee shall do all things reasonably necessary to prevent or reduce to the fullest extent scarring and erosion of the lands, pollution of the water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities on or connected with this lease or permit causes damage to the watershed or pollution of the water resources, the lessee or permittee agrees to repair such damage and to take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the authorized representative of the Secretary of Agriculture.

(4) If in the opinion of the authorized representative of the Secretary of Agriculture, the lands are valuable for watershed protection, the lessee or permittee shall provide for control of surface runoff and return the affected area to as productive condition as practicable.

(5) To pay the lessor or permitter or his tenant or the surface owner or his tenant, as the case may be, for any and all damage to or destruction of property caused by the lessee's or permittee's operations hereunder; to save and hold the lessor or permitter or the surface owner or their tenants harmless from all damage or claims for damage to persons or property resulting from the lessee's or permittee's operations under this lease or permit.

(6) To recognize existing uses and commitments, in the form of Department of Agriculture grazing, timber cutting, and special use permits, water developments, ditch, road, trail, pipeline, telephone line, and fence rights-of-way and other similar improvements, and to conduct his operations so as to interfere as little as possible with the rights and privileges granted by these permits or with other existing uses.

(7) To install and maintain cattle guards to prevent the passage of livestock in any openings made in fences by the lessee or permittee or his contractors to provide access to the lands covered by this lease or permit for automotive and other equipment.

(8) If lessee or permittee shall construct any camp on the lands, such camp shall be located at a place approved by the authorized representative of the Secretary of Agriculture, and such representative shall have authority to require that such camp be kept in a neat and sanitary condition.

(9) To comply with all federally-approved rules and regulations of the Secretary of Health, Education, and Welfare governing the emission of pollutants into the air from activities which are embraced in this lease or permit.

(10) To comply with all the rules and regulations of the Secretary of Agriculture governing the national forests or other lands under his jurisdiction which are embraced in this lease or permit.

(11) Unless otherwise authorized, prior to the beginning of operations to appoint and maintain at all times during the term of this lease or permit a local agent upon whom may be served written orders or notices respecting matters contained in this stipulation, and to inform the authorized representative of the Secretary of Agriculture, in writing, of the name and address of such agent. If a substitute agent is appointed, the lessee or permittee shall immediately so inform the said representative.

(12) To address all matters relating to this stipulation to

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who is the authorized representative of the Secretary of Agriculture, or to such other representative as may from time to time, be designated, provided that such designation shall be in writing and be delivered to the lessee or permittee or his agent.

(Signature of Lessee)

FURTHER PLANNING AREA STIPULATION

The following described lands embraced in this lease/permit/license were identified in the Roadless Area Review and Evaluation (RARE II) decision document as requiring further planning:

Future planning may identify all or part of these lands as suitable for wilderness, and the lands so identified may ultimately be designated as Wilderness. Information made available to the Forest Service regarding discoveries of mineral deposits on these lands will be considered in the planning process and may be key factors in the land allocation.

This clause shall become inoperative in the event this area is determined as not suitable for wilderness.

Any terms of this lease/permit/license to the contrary notwithstanding, the following terms shall apply to the above described lands:

1. Only exploration activities for the purposes of discovering and disclosing the extent of mineral deposits is allowed, until development and production operations are specifically concurred in by the Forest Service based on a land management plan and/or a specific environmental analysis of an operating plan.
2. Exploration plans must be specifically approved by the Geological Survey and concurred in by the Forest Service. Plans for geophysical exploration must be approved by the Forest Service. The Forest Service will agree to reasonable access for conducting necessary exploration operations.
3. Any lands covered by this lease/permit/license which Congress designates as Wilderness shall become subject to the provisions of the applicable Wilderness legislation, and the Secretary of Agriculture's regulations and Forest Service policies pertaining thereto.
4. The lessee/permittee/licensee will be responsible as he deems necessary to protect his interest, for initiating requests to the Department of the Interior for suspension of lease/permit/license terms, rental, or minimum royalties. The Forest Service does not intend that the inclusion of this stipulation be construed as a basis to deny a request for suspension.
5. Until these lands are allocated to non-wilderness purposes, by a land management plan or specific environmental analysis and decision, mineral-related operations are subject to the following terms:
 - (a) Construction of access ways and operation sites will not be permitted in areas of extremely high environmental sensitivity where such construction would cause serious and irreparable environmental damage.
 - (b) Access way construction will be permitted only where existing access ways are inadequate or other methods of access are impractical.
 - (c) Access ways will be built to a standard no higher than required for passage of equipment and support personnel, and to protect surface resources.
 - (d) The access ways and other areas of operation will be reclaimed, as soon as they have served their purpose, to a condition as near as practical to the surface condition existing prior to the authorized use of the lands.

This stipulation is hereby accepted.

CLASSIFIED AREA STIPULATION
(36 CFR 294)

The use of the lands within the external boundaries of the _____
Classified Area as described below, for the purpose
of this license/permit/lease will be restricted to the following unless otherwise
specifically agreed to by the Forest Service in the Operation Plan:

- (a) To conduct prospecting and exploratory activities upon said lands for the purpose of locating and determining the existence of possible mineral resources beneath said lands by the use of such instruments and non-motorized equipment as may be carried by hand or on horseback. No explosives shall be used nor shall any wheeled, mechanized or motorized vehicles or equipment be used or transported upon the surface of said lands for such purposes.
- (b) Operation shall be authorized to drill for, produce, and remove minerals from said lands by methods which will avoid invasion or disturbance of the surface.
- (c) This stipulation is in effect for the following described lands:

Licensee/Permittee/Lessee

Note: The applicant is encouraged to contact the District Ranger for further information regarding the restrictive nature of this stipulation.

LIMITED SURFACE USE STIPULATION

The licensee/permittee/lessee is given notice that all or portions of the license/permit/lease area contain special values, or are needed for special purposes, and require special attention to prevent damage to surface resources. Surface use or occupancy within such areas will be subject to limitations and will be authorized only when it is demonstrated to be essential to operations. Operating plans for these areas must provide for such measures as are satisfactory to the Forest Service for protection of the described special values and existing or planned uses. The operator must have advance approval of the authorized officers of the Minerals Management Service and the Forest Service for surface uses involving significant disturbance to surface resources, including wildlife. After the Forest Service has been advised of the proposed surface use on these lands, and on request of the operator, the Forest Service will furnish further data on such areas, which now include but are not limited to:

Reason for Restriction, and duration: (if less than full-time designate months)

Licensee/Permittee/Lessee

Note: The applicant is encouraged to contact the District Ranger for further information regarding the restrictive nature of this stipulation.

(2/82)

SURFACE DISTURBANCE STIPULATION

1. Notwithstanding any provision of this license/permit/lease to the contrary, any drilling, construction or other operation on the lands covered by this license/permit/lease that will disturb the surface thereof or otherwise affect the environment (hereinafter called "surface disturbing operation") conducted by licensee/permittee/lessee shall be subject, as set forth in this stipulation, to the prior approval of such operation by the authorized officer of the Geological Survey in consultation with the Forest Service, and to such reasonable conditions not inconsistent with the purposes for which this license/ permit/lease is issued, as the authorized officer may require to protect the surface of these lands and the environment.
2. Prior to entry upon the land, or the disturbance of the surface thereof, for drilling or other purposes, the licensee/permittee/lessee shall submit for approval the appropriate number of copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the authorized officer of U.S. Geological Survey and the Forest Service Officer, as shown in Item 12 of BLM Form 3109-3. The plan of operation must assure adequate protection of drainages, water bodies, springs, or fish and wildlife habitat, steep slopes or fragile soil.
3. An environmental analysis will be made by the Geological Survey, in consultation with the Forest Service, for the purpose of insuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

Upon completion of said environmental analysis, the authorized officer of the Geological Survey shall notify the licensee/permittee/lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

Said conditions may relate to any of the following:

- (a) The location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted.
 - (b) The types of vehicles that may be used and the areas in which they may be used.
 - (c) The manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.
4. The licensee/permittee/lessee agrees that during periods of adverse conditions due to climatic factors such as thawing, heavy rains, or flooding, all activities creating irreparable or extensive damage, as determined by the Forest Service, will be suspended or the plan of operation modified and agreed upon.

5. PROTECTION OF CULTURAL AND PALEONTOLOGICAL RESOURCES

(a) The Forest Service is responsible for assuring that the area to be disturbed on this license/permit/lease is inventoried to determine the presence of cultural resources and to specify those cultural resources requiring protection and/or mitigation measures to be undertaken by the operator.

Unless notified to the contrary by the Forest Service, the operator may, at his discretion and cost, conduct the inventory on the lands to be disturbed. This intensive inventory must be done by, or under the supervision of, a qualified archeologist approved by the Forest Service. Upon review of the inventory report, the Forest Service will specify those cultural resources requiring protection and/or mitigation measures to be undertaken by the operator. All costs of protection and salvage of cultural resource values will be borne by the operator and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

(b) The operator shall bring to the attention of the Forest Service and the authorized officer of the U.S. Geological Survey, significant paleontological values encountered in areas to be disturbed, for evaluation and for instructions as to the appropriate action to be followed by the operator.

(c) The operator shall immediately cease operations in areas in which any antiquities or other objects of historic or scientific interest are discovered and bring the discovery to the attention of the Forest Service and the authorized officer of the U.S. Geological Survey. Any such discoveries shall be left intact until the operator is permitted to proceed by the authorized officer of the U.S. Geological Survey.

6. PROTECTION OF ENOANGERED OR THREATENED SPECIES

The Forest Service is responsible for assuring that the area to be disturbed is examined, prior to undertaking any ground disturbing activities on lands covered by this license/permit/lease, to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow any use and occupancy that would detrimentally affect any of the endangered or threatened plant or animal species.

The operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by the Forest Service. An acceptable report must be provided to the Forest Service identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

WILD AND SCENIC RIVERS SYSTEM STIPULATIONS

This stipulation applies to National Forest System lands adjacent to the _____ River, under study for possible inclusion in the National Wild and Scenic Rivers System (82 Stat. 906, as amended).

1. The licensee/permittee/lessee may not use, occupy, or disturb any surface portion of the license/permit/lease application area described in this stipulation without prior specific authorization of the Forest Service while the Congress is considering inclusion of the River into the National Wild and Scenic River System.
 - a. If Congress adds the River to the National Wild and Scenic River System, the Forest Service will prepare a management plan which will specify the particular controls on the lands described below.
 - b. If by the date prescribed by Section 7b of the Wild and Scenic River Act (82 Stat. 906, as amended) or possible amendments, the Congress has not added the River to the National Wild and Scenic River System, the area will be used according to a National Forest Land Resources Management Plan which may specify particular controls or special requirements for mineral development on the license/permit/lease area.
2. This stipulation is in effect for the following described lands:

Licensee/Permittee/Lessee

Note: The applicant should know that there is at this time no assurance that use, occupancy, or disturbance of the surface of the above described land can ever be permitted.

SURFACE USE STIPULATION

Surface use or occupancy that would cause significant surface disturbance is not authorized for the lands described below. This does not apply to casual or other uses which do not significantly disturb surface resources. The operator must have advance approval of the authorized officers of the Geological Survey and the Forest Service for any surface uses related to lease operations.

Reason for restriction:

Lessee/Licensee/Permittee

ACTIVITY COORDINATION STIPULATION

This lease includes lands within _____
_____ which has resource values sensitive to high
levels of activity. In order to minimize impacts to these resources, special
conditions, such as unitization prior to approval of operations and/or limitations
to spread surface disturbance activities over time and space may be required prior
to approval and commencement of any operations on the lease.

This stipulation is in effect for the following described lands.

Reason for Restriction:

Licensee/Permittee/Lessee

NOTE: The applicant is encouraged to contact the Forest Supervisor for further
information regarding the restrictive nature of this stipulation.

CONDITIONAL NO SURFACE DISTURBANCE STIPULATION

The prospective licensee/permittee/lessee is given notice that parts of the lands described are affected by the following conditions:

- | | <u>Check as Applies</u> |
|---|-------------------------|
| - Slopes steeper than 40 percent | _____ |
| - High erosion hazard | _____ |
| - High hazard for mass slope failure | _____ |
| - Threatened or endangered wildlife and its habitat, as follows: | |
| -- Possible Grizzly Bear essential habitat | _____ |
| -- Essential habitat for Federally and/or State classified T&E species (_____) | _____ |
| Name of Species | |
| -- Critical habitat necessary for recovery of Federally and/or State classified T&E species (_____) | _____ |
| Name of Species | |
| - Threatened and endangered Federally and/or State classified vegetation species (_____) | _____ |
| Name of Species | |
| - Low visual absorption capacity requiring special measures for mitigation | _____ |

Should the prospective licensee/permittee/lessee accept this contract, this document is his acknowledgement that surface disturbance, including occupancy and use of the surface of those parts of the lands affected by the above-described conditions, will be authorized only if an operating plan can be devised that will provide for the surface resource protection required due to the above-described conditions.

Signature
(Licensee/Permittee/Lessee)

Note: The applicant is encouraged to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this contract and the operator is encouraged to make the same contact well in advance of proposed operations.

WILDERNESS OIL, GAS, GEOTHERMAL STIPULATION

The lessee is given notice that all or portions of the lease area are within or have been recommended for addition to the National Wilderness Preservation System, or have been designated by Congress as Wilderness Study Areas. These lands contain special values, are needed for special purposes, and require special attention to prevent or control damage to surface resources and wilderness character. Any surface use or occupancy of these National Forest System lands shall be subject to special operating restrictions designed to prevent or control adverse impacts on the wilderness character and to restore, as near as practicable, the surface of the disturbed lands as soon as they are no longer needed for oil, gas, or geothermal exploration and development operations.

This stipulation applies to the following described lands:

Legal Description by Section, Township, Range and/or
Metes and Bounds Description as Necessary

Name of Area _____

Any terms of this lease to the contrary notwithstanding, the following terms shall apply to the above-described lands:

1. Geophysical investigations will be performed prior to submission of an Application for Permit to Drill an exploratory well. (Geophysical investigations will be authorized by a Forest Service Special Use Permit.)

2. Surface disturbing activities, including exploratory drilling, on the leased lands will not be authorized until the Minerals Management Service determines that the lessee's geophysical investigation data indicates that there is a reasonable expectation of finding oil and gas or geothermal resources in the area proposed for drilling.

3. All access for operations within the above-described lands related to exploration, including drilling, shall be conducted by non-motorized ground and/or by airlift methods. The staging site shall be outside the above-described lands and must be approved by the Federal land managing agency should such site be on Federally-owned lands. Routes and times of air travel over the above-described lands must have Forest Service approval. Also, exploratory drilling will be authorized only after the lessee submits detailed plans for development of ground-surface access to the drill site should a commercial oil, gas or geothermal discovery be made. These plans must show how adverse impacts on the wilderness characteristics will be prevented or controlled and how the surface of the disturbed lands is to be restored, as near as practicable, as soon as the lands are no longer needed for the purposes of this lease.

4. When an operating plan contains all of the measures necessary for occupancy, use, protection, and restoration of the wilderness values, it will be jointly approved by the Forest Service and the Minerals Management Service.

5. In the event that the Congress returns any of the lands described above to non-wilderness management, the conditions of these stipulations with respect to such lands are automatically rescinded and other stipulations appropriate to control operations for the protection of surface resources will be imposed.

This stipulation is hereby accepted.

(Date)

(Lessee)

Note: The applicant is encourage to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this lease.

(2/82)

WILDERNESS MINABLE MINERALS STIPULATION

The prospecting permittee or lessee is given notice that all or portions of the permit/lease area are within or have been recommended for addition to the National Wilderness Preservation System, or have been designated by Congress as a Wilderness Study Area. These lands contain special values, are needed for special purposes and require special attention to prevent or control damage to surface resources and wilderness character. Any surface use or occupancy shall be subject to special operating restrictions designed to prevent or control adverse impacts on the wilderness character and to restore, as near as practicable, the surface of the disturbed lands as soon as they are no longer needed for the purposes of this permit or lease.

This stipulation applies to the following described lands:

Legal Description by Section, Township, Range, and/or
Metes and Bounds Description as Necessary

Name of Area _____

Any terms of this permit/lease to the contrary notwithstanding, the following shall apply to the above-described lands:

1. Operations under prospecting permit or lease.

a. When an operating plan contains all of the necessary provisions to prevent or control adverse impacts and to restore, as near as practicable, the surface of the disturbed lands as soon as the lands have served the purposes of this permit/lease, the plan will be jointly approved by the Minerals Management Service and the Forest Service.

b. Access ways using the ground surface, and their construction, will be permitted only when other methods of access are not feasible.

c. Ground-surface access ways and their construction, and operation sites other than the mine itself, will not be permitted in areas of extremely high environmental sensitivity.

d. Ground-surface access ways will be built to a standard no higher than required for safe passage of equipment, products, and personnel, and to protect surface resources.

2. Operations under prospecting permit.

a. Initial access for prospecting operations, including drilling, shall be conducted by non-motorized ground and/or by airlift methods. The staging site shall be outside the above-described lands and must be approved by the Federal land managing agency should such site be on Federally-owned lands. Routes and times of air travel over the above-described lands must have Forest Service approval.

b. Upon confirmation by the Minerals Management Service of the discovery of a potentially commercially valuable deposit that would justify construction of ground-surface access for further exploratory and development operations:

(1) The permittee, before construction of ground-surface access can be approved, must submit detailed plans showing where and how such access will be developed; and

(2) Such plans must, to the extent possible, provide that the access route and method be the same as that which will be used for further development and production of the deposit.

3. In the event that the Congress returns any of the lands described above to non-wilderness management, the conditions of these stipulations with respect to such lands are automatically rescinded and other stipulations appropriate to control operations for the protection of surface resources will be imposed.

This stipulation is hereby accepted.

(Date)

(Permittee/Lessee)

Note: The applicant is encouraged to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this permit or lease.

Management Area
Map

San Juan
National Forest
Colorado

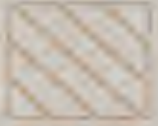
SOUTH SAN JUAN WILDERNESS

**Land and Resource
Management Plan**

map 2

2 HC 107
C6526

LEGEND



Areas available for Mineral Leasing - No Surface Occupancy



Areas Unavailable for Mineral Leasing

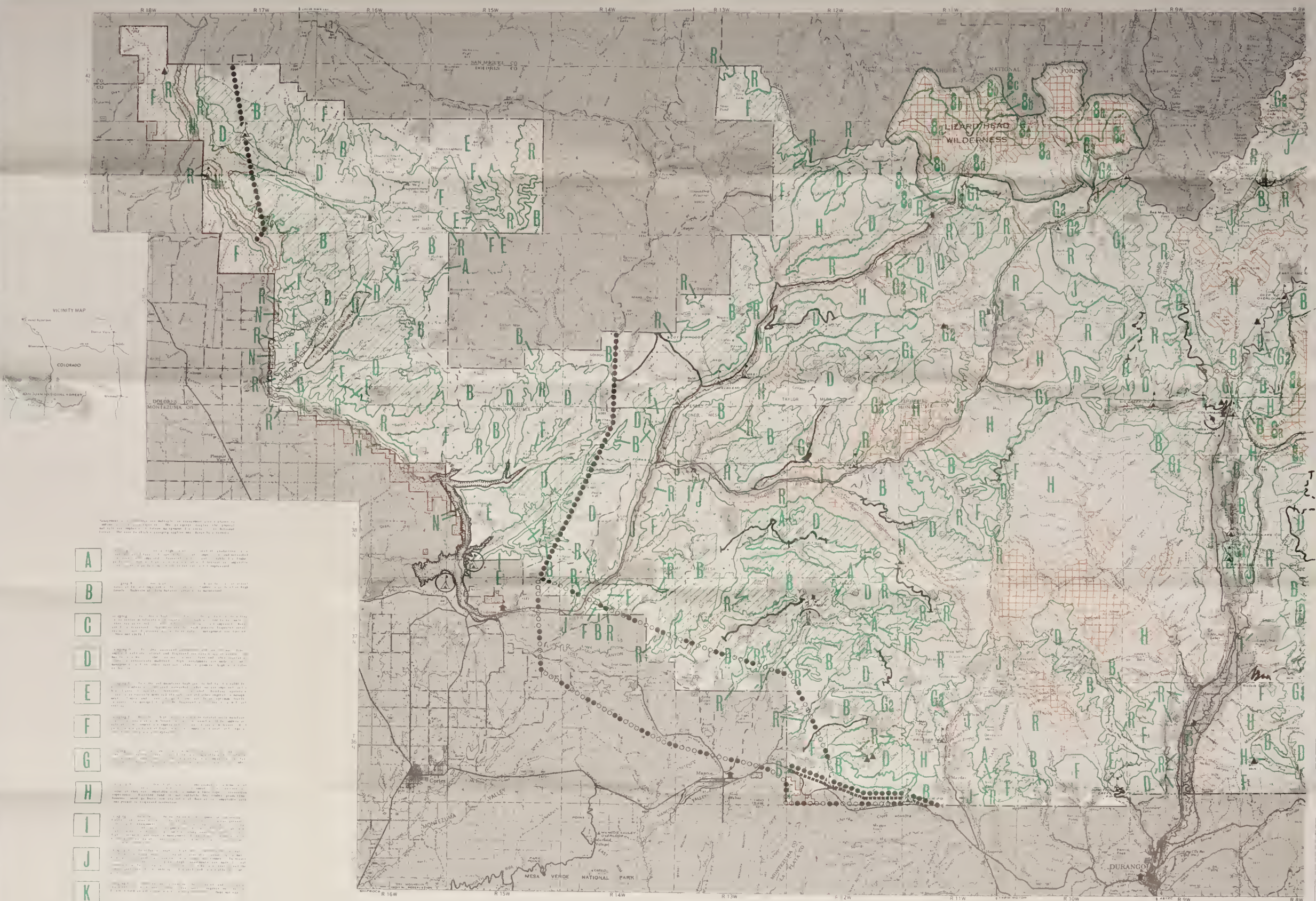
All other areas available for leasing with Surface Occupancy



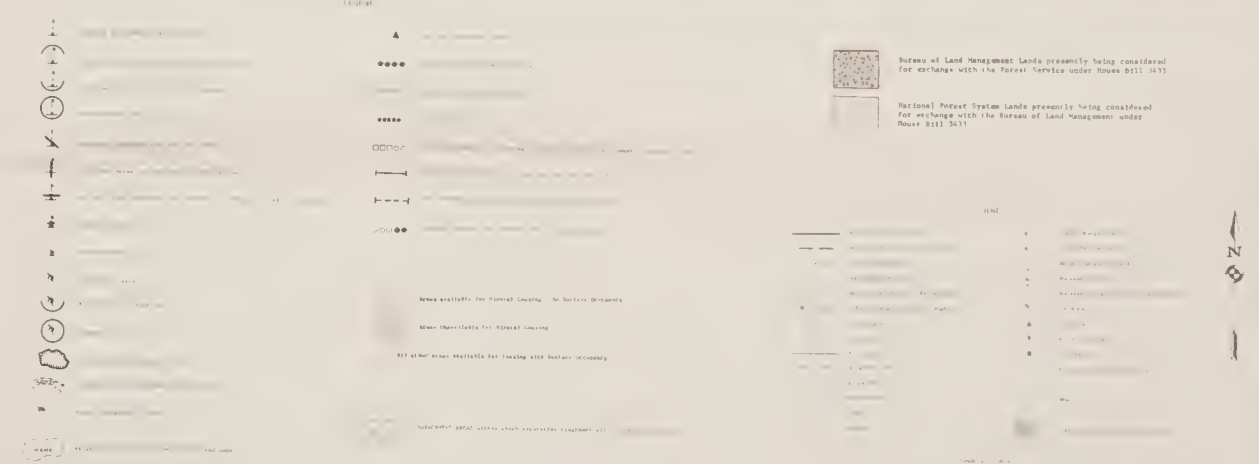
Continental Divide National Scenic Trail



Wilderness and Special Area boundary and name



- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P
- Q
- R
- 8



THE MANAGEMENT AREAS IDENTIFIED ON THIS MAP AND THE MANAGEMENT DIRECTION DEFINED IN THE FOREST PLAN APPLY TO NATIONAL FOREST SYSTEM LANDS ONLY. THEY DO NOT APPLY TO ANY LANDS IN STATE, PRIVATE OR OTHER OWNERSHIPS.

West Half

Management Area Map

San Juan National Forest
Colorado

Land and Resource
Management Plan

map 1

MANAGEMENT AREA GROUPINGS

Management area groupings are multiple use management prescriptions or combinations of prescriptions. The groupings display the general multiple use emphasis of future management for areas of the National Forest. The area to which a grouping applies may change by alternative.

8

Grouping 8 -- Protects and preserves the physical and biological character of designated wildernesses and Wilderness Study Areas in a way which leaves them unimpaired for future use and enjoyment. 8_a, 8_b, 8_c, and 8_d rely on indirect means of protecting wilderness values while 8_e, 8_f, 8_g, and 8_h use intensive visitor controls. Forested lands are not suitable for timber production.

THE MANAGEMENT AREAS IDENTIFIED ON THIS MAP AND THE MANAGEMENT DIRECTION DEFINED IN THE FOREST PLAN APPLY TO NATIONAL FOREST SYSTEM LANDS ONLY. THEY DO NOT APPLY TO ANY LANDS IN STATE, PRIVATE OR OTHER OWNERSHIPS.

Large scale maps showing specific boundaries for management areas, vegetative treatment, and mineral leasing are available for review in the San Juan National Forest Headquarters.



A
Grouping 1. Low level of forest production on a...
B
Grouping 2. Moderate level of forest production...
C
Grouping 3. High level of forest production...
D
Grouping 4. Low level of forest production...
E
Grouping 5. Moderate level of forest production...

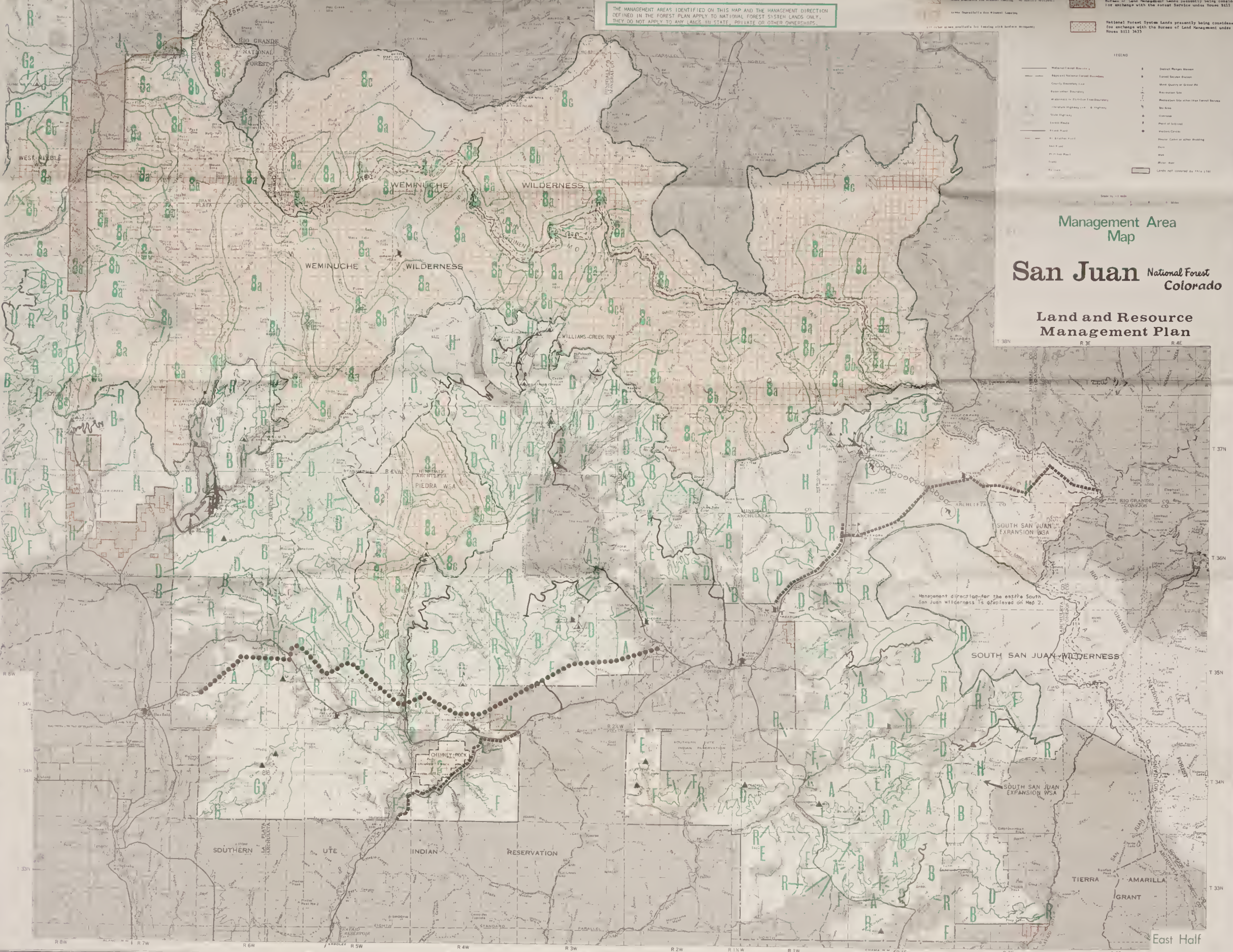
F
Grouping 6. Low level of forest production...
G
Grouping 7. Moderate level of forest production...
H
Grouping 8. High level of forest production...
I
Grouping 9. Low level of forest production...
J
Grouping 10. Moderate level of forest production...

K
Grouping 11. Low level of forest production...
L
Grouping 12. Moderate level of forest production...
M
Grouping 13. High level of forest production...
N
Grouping 14. Low level of forest production...
O
Grouping 15. Moderate level of forest production...

P
Grouping 16. Low level of forest production...
Q
Grouping 17. Moderate level of forest production...
R
Grouping 18. High level of forest production...
8
Grouping 19. Low level of forest production...
8
Grouping 20. Moderate level of forest production...



THE MANAGEMENT AREAS IDENTIFIED ON THIS MAP AND THE MANAGEMENT DIRECTION DEFINED IN THE FOREST PLAN APPLY TO NATIONAL FOREST SYSTEM LANDS ONLY. THEY DO NOT APPLY TO ANY LAND IN STATE, PRIVATE OR OTHER OWNERSHIP.



Management Area Map

San Juan National Forest

Colorado

Land and Resource Management Plan



Management Area Map

San Juan

National Forest

Colorado

SOUTH SAN JUAN WILDERNESS

Land and Resource Management Plan

map 2

MANAGEMENT AREA GROUPINGS

Management area groupings are multiple use management prescriptions or combinations of prescriptions. The groupings display the general multiple use emphasis of future management for areas of the National Forest. The area to which a grouping applies may change by alternative.

8

Grouping 8 -- Protects and preserves the physical and biological character of designated wildernesses and Wilderness Study Areas in a way which leaves them unimpaired for future use and enjoyment. 8, 8a, 8c, and 8d rely on indirect means of protecting wilderness values while 8b, 8f, 8g, and 8h use intensive visitor controls. Forested lands are not suitable for timber production.

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Large scale maps showing specific boundaries for management areas, vegetative treatment, and mineral leasing are available for review in the San Juan National Forest Headquarters.

LEGEND

- Areas available for Mineral Leasing - No Surface Occupancy
- Areas Unavailable for Mineral Leasing

All other areas available for leasing with Surface Occupancy

- Continental Divide National Scenic Trail
- Wilderness and Special Area boundary and name

LEGEND

- National Forest Boundary
- Adjacent National Forest Boundary
- County Boundary Line
- Reservation Boundary
- Wilderness Boundary
- Interstate Highway and U.S. Highway
- State Highway
- Forest Route
- Paved Road
- All Weather Road
- Dirt Road
- Primitive Road
- House, Cabin or other Building
- Dam
- Well
- Water Well
- Spring
- Mountain Pass
- Mine, Quarry or Gravel Pit
- Recreation Site
- Recreation Site other than Forest Service
- Ski Area
- Overlook
- Point of Interest

Lands not covered by this plan

Scale 1/4"=1 mile

1 0 1 2 3 4 5 Miles

VICINITY MAP



SOUTH SAN JUAN
WILDERNESS



R0000 923143